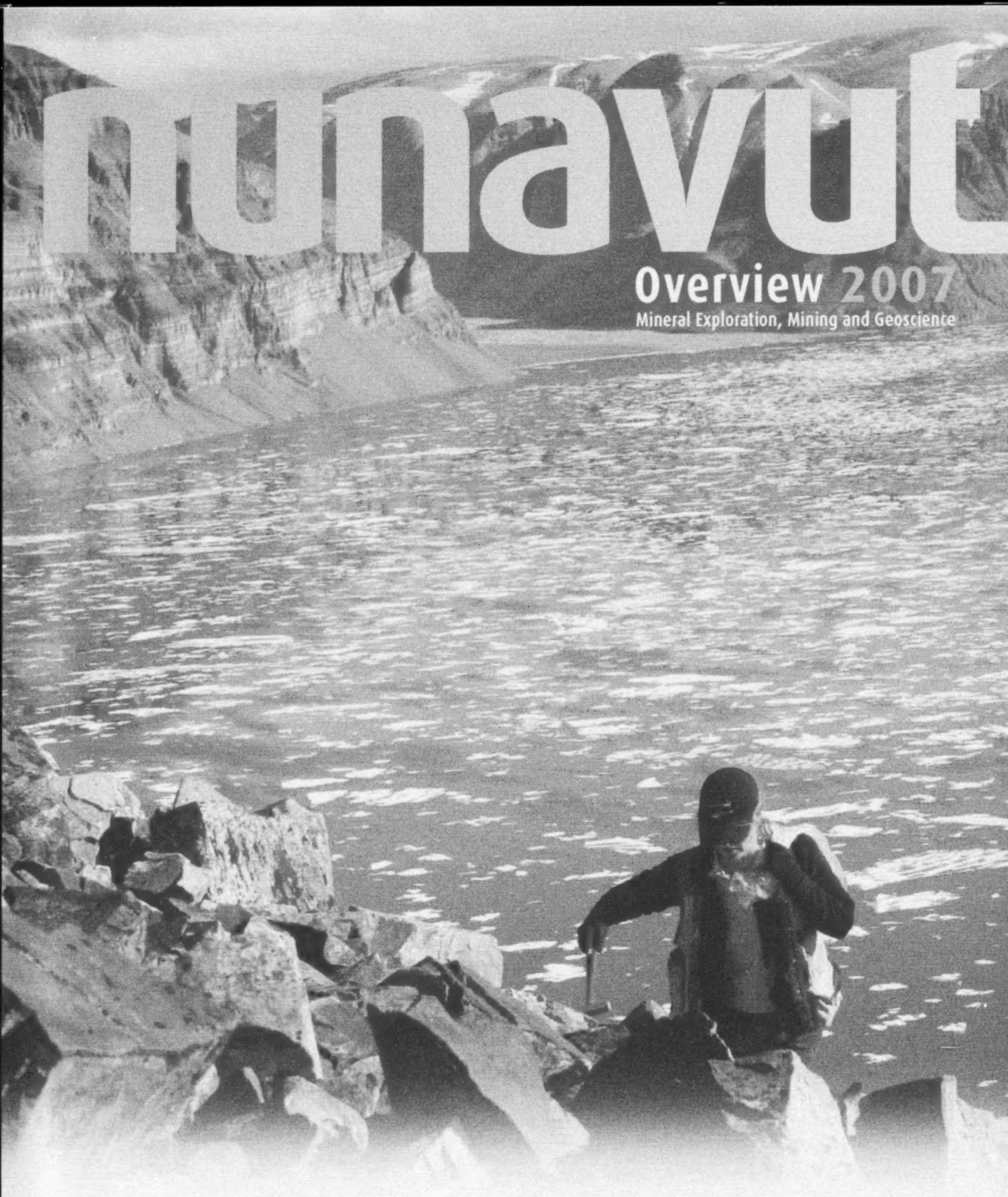
nunavut

Overview 2007

Mineral Exploration, Mining and Geoscience



ᓄᓇᕗᑦ
Nunavut

CANADA-NUNAVUT GEOSCIENCE OFFICE

NUNAVUT TUNNGAVIK

Indian and Northern Affairs Canada
Affaires indiennes et du Nord Canada

(Above) CNGO field assistant and Dalhousie University student, Chris Yakymchuk, studies outcrops of Precambrian rocks, eastern Southampton Island.

COURTESY CNGO

Cover photo:
Photo of Dr. Elizabeth Turner in North Baffin, Nunavut.

PROVIDED BY CANADA-NUNAVUT GEOSCIENCE OFFICE

Geologist examining core from Ferguson Lake Ni-Cu-Co-PGE project.

COURTESY STARFIELD RESOURCES

Contents:

Land Tenure in Nunavut 3
Indian and Northern Affairs Canada 4
Government of Nunavut 6
Nunavut Tunngavik Incorporated 8
Canada-Nunavut Geoscience Office 10
Summary of 2007 Exploration Activities 13
    Kitikmeot Region 13
    Kivalliq Region 38
    Qikiqtani/Baffin Region 57

About the *Nunavut Overview 2007: Mineral Exploration, Mining and Geoscience*

This exploration overview is a combined effort of four partners: Mineral Resources Division, Indian and Northern Affairs Canada; Minerals and Petroleum Resources Division, Government of Nunavut; Department of Lands and Resources, Nunavut Tunngavik Incorporated and the Canada-Nunavut Geoscience Office. The intent of this publication is to capture information on exploration and mining activities in 2007, and to make this information available to the public. All exploration information was gathered prior to mid-November 2007.

We thank the many contributors who submitted data and photos for this edition. Prospectors and mining companies are welcome to submit information on their programs for inclusion in the next Overview. Feedback and comments are appreciated.

NOTE TO READERS

This document has been prepared on the basis of information available at the time of writing. All resource and reserve figures quoted in this publication are derived from company news releases, websites and technical reports filed with SEDAR (www.sedar.com). Readers are directed to individual company websites for details on the reporting standards used in each resource and reserve estimate. The authors make no warranty of any kind with respect to the content and accept no liability, either incidental, consequential, financial or otherwise, arising from the use of this document.

Land Tenure in Nunavut

The territory of Nunavut was created in April 1999 as a result of the Nunavut Land Claims Agreement (NLCA), the largest Aboriginal land settlement in Canadian history. Spanning two million square kilometres (km^2), the territory has 25 communities and an approximate population of 30,000 people. Inuit represent 85 per cent of Nunavut's population, creating the foundation of the territory's culture and values. This culture is inherently connected to the land, shaping government, business and day-to-day life.

In addition to the creation of the new territory, the NLCA gave Inuit fee simple title to 356,000 km^2 of land. There are 944 parcels (16 per cent of Nunavut) of Inuit Owned Lands (IOL) where Inuit hold surface title only (surface IOL). The Government of Canada or "Crown" retains the mineral rights to these lands. Inuit also hold fee simple title including mineral rights to the remaining 150 parcels of IOL (subsurface IOL), which total 38,000 km^2 and represent approximately two per cent of the territory. Surface title to all IOL is held in each region by one of the three Regional Inuit Associations (RIAs) while Inuit subsurface title with respect to subsurface IOL is held and administered by Nunavut Tunngavik Incorporated (NTI). NTI issues rights to explore and mine through its own mineral tenure regime. Mineral rights (mineral claims or leases) that existed at the time of the NLCA signing – known as grandfathered rights – continue to be administered by Indian and Northern Affairs Canada (INAC) until they terminate or the holder transfers its interests to the NTI regime. For both surface and subsurface IOL, access to the land, through a Land Use Licence or Commercial Lease, must be obtained from the appropriate RIA.

The Crown owns mineral rights to 98 per cent of Nunavut. INAC administers these rights through the Northwest Territories and Nunavut Mining Regulations (NNMR). This includes surface IOL, for which access to the land must be obtained from the RIAs as explained above.

Significantly, the NLCA is a final settlement whereby all land claims in Nunavut have been settled with the Inuit of Nunavut, thus providing an unmatched level of land tenure certainty. However, land claims overlapping Hudson Bay and the southernmost Kivalliq are being negotiated with residents of northern Quebec and northern Manitoba respectively.

For more information on the location of IOL and Crown land in the territory, take a look at the 2007 Nunavut Exploration and Activity Map in the centre of this publication. ■

GUIDE TO ACRONYMS

CNGO	Canada-Nunavut Geoscience Office
EA	Inuit Owned Lands Mineral Exploration Agreement
EDT	Department of Economic Development and Transportation, Government of Nunavut
EIS	Environmental Impact Statement
EM	Electromagnetic
GIS	Geographic Information System
GN	Government of Nunavut
GSC	Geological Survey of Canada
IIBA	Inuit Impact Benefit Agreement
INAC	Indian and Northern Affairs Canada
IOL	Inuit Owned Land
IPGs	Institutions of Public Government
KIA	Kitikmeot Inuit Association
KIM	Kimberlite Indicator Mineral(s)
KivIA	Kivalliq Inuit Association
MRO	Mining Recorder's Office
NGOs	Non-Government Organizations
NIRB	Nunavut Impact Review Board
NLCA	Nunavut Land Claims Agreement
NNMR	Northwest Territories and Nunavut Mining Regulations
NRCan	Natural Resources Canada
NT	Northwest Territories
NTI	Nunavut Tunngavik Incorporated
NTS	National Topographic System
NWB	Nunavut Water Board
PGEs	Palladium group elements
QIA	Qikiqtani Inuit Association
RIA	Regional Inuit Association

Indian and Northern Affairs Canada

Water quality monitoring.
COURTESY INAC WATER RESOURCES

During 2006, the exploration and mining sector spent an estimated $210.6 million in Nunavut. Based on Natural Resources Canada's (NRCan) recently-released bi-annual survey, $266.7 million is forecast for 2007. The overall number of hectares covered by some form of mineral tenure declined from 48.6 million hectares in 2005 to 27 million hectares in 2007, as explorers turned to more focused and higher cost field programs.

The number of exploration properties under evaluation in the territory's three districts, Kitikmeot, Kivalliq and Qikiqtani, has increased over last year. The largest increase is with grassroots projects targeting uranium. There are over 136 properties undergoing varying levels of exploration: 9 base metals, 41 diamonds, 26 gold and precious metals, 2 iron, 6 nickel-copper-platinum group elements (PGEs), 49 uranium, 2 coal and 1 sapphire.

As major mining companies strive to replenish reserves, Nunavut projects operated by juniors are attracting attention. 2007 marked a year in which three juniors with advancing exploration projects were courted by major international mining companies. Strategic investments and technical alliances continue to be made by majors in juniors with significant exploration portfolios in Nunavut.

Historic and current exploration efforts have already identified prospective geological terrains within Nunavut. In the North Slave province, late Achaean supracrustal rocks comprise the greenstone belts, host to a large number of gold and base metal deposits. Similar Achaean supracrustal rocks within the western Churchill Province are known to host gold deposits and other mineral occurrences. For gold, the principal exploration targets are iron formation-hosted and vein-related gold in Achaean supracrustal belts in both the Slave and western Churchill, with some work on paleoplacer gold of probable Paleoproterozoic age in the western Churchill.

Three separate gold mineralized districts have been identified within the over 1,000 km^2 of the Hope Bay greenstone belt. Current resource estimates suggest in excess of 10 million ounces of gold (indicated and inferred) within this belt with several well-advanced vein-gold exploration properties (Doris North, Madrid, Boston). The potential of iron formation-hosted gold deposits (George/Goose Lakes) continues to grow. Also within the north Slave province, the High Lake greenstone belt extending 140 km south from the Coronation Gulf hosts numerous copper, zinc, lead, gold and silver showings, including the High Lake volcanogenic massive sulphide deposit and the Ulu gold deposit.

The Woodburn Lake Group within the Kivalliq region hosts a series of Achaean-aged gold deposits in the 25 km Meadowbank trend, two in highly deformed magnetite iron formations and one within an intermediate volcanic rock assemblage. Continued work in the Rankin belt (Meliadine West) and Committee Bay greenstone belt (Committee Bay projects) of western Churchill Province confirms the gold endowment of the area.

Distinct clusters of diamond exploration properties are well established. On-going work in many areas including the Coronation Gulf district, Kugaaruk district, north-central Baffin Island, Melville Peninsula, and portions of the Hearne domain near Rankin Inlet continues to produce new diamondiferous kimberlite discoveries. Companies are working to discriminate the more diamondiferous bodies and understand their emplacement geometry.

Uranium exploration is underway across Nunavut, with the priority model being mineralization associated with the unconformity of Proterozoic-aged sedimentary basins and the underlying basement rocks.

Indian and Northern
Affairs Canada,
Nunavut Regional Office
PO Box 2200
Building 918
Iqaluit, NU X0A 0H0

E-mail
nunavutminerals@inac.gc.ca

Website
www.ainc-inac.gc.ca/nunavut

Re-evaluation of historical uranium showings and new exploration work is underway in the Hornby Bay, Thelon and Baker basins as well as the smaller Elu, Borden, and Fury-Hecla basins. Forty-nine properties are under evaluation, with recent exploration activities producing encouraging results.

Nickel – Cu – PGE +/- Co exploration is being conducted in two main areas: the western Kitikmeot region with the Muskox Intrusion and the Kivalliq region with the targets being typical komatiite and gabbro intrusions. The Muskox Intrusion has known high-grade massive sulphide accumulations, similar in model to the world-class Norilsk deposit in Russia. The Ferguson Lake palladium-platinum-nickel-copper-cobalt deposit in the Kivalliq, the most advanced project in this area, had significant advances in 2007, redefining and adding to the indicated and inferred resources.

Iron is an important commodity in Nunavut with the main advanced exploration project (Mary River) estimating 2007 expenses of $90 million. Four high-grade iron ore deposits have been identified with production expectations projected for over 25 years with 12.6 million tonnes per year of direct-shipping iron ore.

Base metal projects, mainly in the Kitikmeot region, continue to garner attention. In the western Kitikmeot, several established domains have large undeveloped massive sulphide deposits (Izok, Hackett River, Hood, Gondor) with significant opportunity.

A wealth of public geoscience information resides in government offices throughout Nunavut. In order to effectively disseminate this information through a single web portal, the *nunavutgeoscience.ca Project* was initiated in October 2005.

Nunavutgeoscience.ca went live in September 2006 and currently operates a public website *(http://www.nunavutgeoscience.ca)* which hosts the NUMIN database. This database contains searches and links to over 3,200 publicly released and downloadable digital assessment reports from both INAC and NTI as well as close to 400 government scientific publications and over 2,600 mineral occurrence showings.

Nunavutgeoscience.ca is currently working towards updating the Showings query and the Reference query applications. New services such as a geophysical and geochemical data are being introduced.

STAFF CONTACTS

MINERAL RESOURCES

Bernie MacIsaac	Manager	867 975 4290	macisaacb@inac.gc.ca
Linda Ham	District Geologist	867 975 4292	haml@inac.gc.ca
Karen Costello	District Geologist	867 975 4569	costellok@inac.gc.ca
Christianne Lafferty	Mineral Archives Administrator	867 975 4293	laffertyc@inac.gc.ca
Laura Lee Tobicoe	Staff Geologist	867 975 4291	tobicoell@inac.gc.ca
Steven Sharpe	Staff Geologist	867 975 4279	sharpes@inac.gc.ca
Archives Orders or Inquiries	nunavutarchives@inac.gc.ca		
Mineral Resources Fax	867 975 4276		

LAND ADMINISTRATION

Spencer Dewar	Manager	867 975 4280	dewars@inac.gc.ca
Jeffrey Holwell	Land Administrative Specialist	867 975 4283	holwellj@inac.gc.ca
Chris Keats	Land Specialist	867 975 4282	keatsch@inac.gc.ca
John Craig	Assistant Land Administrator	867 975 4285	craigjg@inac.gc.ca

MINING RECORDER'S OFFICE

Becky Leighfield	Mining Recorder	867 975 4281	leighfieldr@inac.gc.ca
Nala Alainga (on leave until July 2008)	Deputy Mining Recorder	867 975 4284	alaingan@inac.gc.ca
Tat Ma	GIS Technician	867 975 4556	mat@inac.gc.ca
Scottie Monteith	Junior GIS Technician	867 975 4278	monteiths@inac.gc.ca
Land Administration and Mining Recorder's Office Fax		867 975 4286	

Government of Nunavut

The Government of Nunavut (GN), through the Department of Economic Development and Transportation (EDT), is working in support of a strong and diversified minerals industry based on best practices of sustainable development, and partnership between Nunavummiut and industry. Exploration expenditures in Nunavut have been increasing steadily since 1999, and now stand at an all-time high. A number of quality discoveries have been made, and there will be substantial opportunities in the territory as exploration continues and as more projects evolve into producing mines. EDT is working to ensure that all Nunavummiut are in a position to benefit from these opportunities, and that they have the option to [illegible]come full participants in development in the territory.

At the same time, it is recognized that exploration and mining companies have the option of investing in many competing jurisdictions worldwide. Therefore, EDT is committed to working with its partners in NTI and the Government of Canada to make the legislative, policy and regulatory environment of Nunavut efficient, internationally competitive and attractive to investors. The recent interest in the territory demonstrated by major, multinational mining companies is a strong vote of confidence in Nunavut's mineral potential, its regulatory system, and the commitment of its people.

EDT has its headquarters in Iqaluit, and Resident Geologist Offices in Arviat and Cambridge Bay.

Current Government of Nunavut initiatives include:

Parnautit: The Nunavut Mineral Exploration and Mining Strategy

To maintain Nunavut's position as a jurisdiction of choice for mineral investment, the GN developed *Parnautit: The Nunavut Mineral Exploration and Mining Strategy*, which provides a framework of policies and actions to encourage mineral discovery and development. The goal of *Parnautit* is: "*To create the conditions for a strong and sustainable minerals industry that contributes to a high and sustainable quality of life for all Nunavummiut.*" Formulation of this strategy involved broadly-based consultations with Nunavummiut from across the territory, Inuit Organizations, Institutions of Public Government (IPGs), the Government of Canada, municipalities, Nunavut's private business sector, non-government organizations (NGOs), and industry. Most notably, the strategy addresses Nunavut's regulatory and taxation regimes, workforce training, infrastructure development and environmental baseline availability.

Students in the field at Introductory Prospecting Course in Rankin Inlet.
COURTESY GN EDT

The strategy was released in March 2007, and work is underway on areas of legislative renewal and regulatory reform, development of a policy on uranium, and community consultation guidelines. In cooperation with the Department of Education, new Earth Science curricula and new rock and mineral teaching kits (developed in conjunction with INAC) will be distributed to all Nunavut schools. The government's strong commitment to public geoscience has been affirmed through new mapping programs, as has core funding for the annual Nunavut Mining Symposium. For more information, or to view a copy of *Parnautit*, please visit http://www.edt.gov.nu.ca/parnautit.

Department of Economic Development & Transportation, Minerals & Petroleum Resources Division
PO Box 1000, Station 1150
Iqaluit, NU X0A 0H0
Fax: 867 975 7870

Website
http://www.edt.gov.nu.ca

Students learning map reading skills at Introductory Prospecting Course in Rankin Inlet.
COURTESY GN EDT

Development Partnership Agreements

The Development Partnership Agreement (DPA) program was introduced in 2006, as a means of extending the territorial off-road fuel tax credit (rebate) to developing and producing mines. Through a DPA, the GN and operator work cooperatively in such areas as education and training, socioeconomic monitoring and mitigation, and infrastructure development. As the physical and economic circumstances of no two mines are alike, so too each DPA should reflect the unique and shared needs of the mine operator and the local population. Proponents entering the regulatory phase are encouraged to begin negotiations with the GN on a Development Partnership Agreement for their projects.

Nunavut Prospectors' Program (NPP)

EDT provides technical and financial assistance to Nunavummiut with demonstrated prospecting skills to carry out their own prospecting projects. The program has been in existence since 1999, and up to $8000 in annual financial assistance is available for each prospector. There are typically 15 to 20 projects funded annually, in all regions of the territory.

Introductory Prospecting Course

Every year, EDT geologists present a six-day Introductory Prospecting Course to interested residents in communities throughout the territory. Since 2000, the course has been offered at least twice in each of Nunavut's 25 communities, with well over 500 graduates to date. Graduates of the course often apply for NPP grants, and many now work as field assistants on mineral exploration projects.

Community Minerals Education and Training

EDT works with many other stakeholders, including the Department of Education, the Government of Canada, and the mining and exploration industries in a number of programs designed to inform Nunavummiut of all ages of the opportunities in the minerals industries. EDT programs and information include:

- Nunavut High School Math and Science Awards Program;
- Mineral Exploration Field Assistant's Course;
- Curriculum development for Nunavut schools;
- 'Careers in Mining' school and community presentations; and
- Mineral exploration company contact list for communities. ■

STAFF CONTACTS

HEADQUARTERS			
Gordon Mackay	Director, Minerals & Petroleum Resources Division	867 975 7822	gmackay@gov.nu.ca
Dr. Eric Prosh	Manager, Mineral Resources	867 975 7827	eprosh@gov.nu.ca
Peter Frampton	Senior Petroleum Advisor	867 975 7842	pframpton@gov.nu.ca
ARVIAT OFFICE			
Francois Berniolles	Resident Geologist	867 857 2297	fberniolles@gov.nu.ca
Ronald Suluk	Community Mining Advisor	867 857 2298	rsuluk@gov.nu.ca
CAMBRIDGE BAY OFFICE			
Gary White	Resident Geologist	867 983 4184	gwhite@gov.nu.ca

Nunavut Tunngavik Incorporated

Mountain Avens, *Dryas integrifolia* in Latin and many names in Inuktitut.

Nunavut Tunngavik Incorporated (NTI) is the Inuit corporation responsible for overseeing implementation of the NLCA. NTI's mandate includes safeguarding, administering and advancing the rights and benefits of the Inuit of Nunavut to promote their economic, social and cultural well being through succeeding generations. The Lands and Resources Department of NTI is responsible for the implementation of Inuit responsibilities related to the management of Inuit Owned Lands (IOL), the environment, minerals, oil and gas, and marine areas.

There are two forms of mineral tenure that grant exclusive rights on subsurface IOL administered by NTI. These are the Inuit Owned Lands Mineral Exploration Agreement (usually referred to as the "Exploration Agreement", or "EA") and the Inuit Owned Lands Mineral Production Lease (referred to as the "Production Lease"). The EA grants a company or individual the exclusive right to explore and prospect for minerals (excluding oil and gas, and Specified Substances such as construction materials and carving stone) on a portion of subsurface IOL. This area, referred to as the Exploration Area, is similar in many ways to a mineral claim under the CMR.

The Production Lease grants the holder of an EA the right to produce minerals from a portion of the Exploration Area known as the Production Lease Area.

NTI has in place a system of application that does not require staking when applying for an EA. Rather, the application requires only a description of the Exploration Area based on latitude and longitude. The applicant must submit to NTI a completed application form (available on request from NTI). The completed application includes a description of the proposed Exploration Area defined by latitude and longitude of the boundaries as well as a map showing the proposed Exploration Area. Applications are kept confidential until the close of the application period in which they are received, thus ensuring that all applicants are treated fairly. Further details on the application process are included in the application form.

It should be noted that although the process and documents described here normally apply, NTI, as a private organization, has complete discretion as to whether it will issue an Exploration Agreement (or other agreement), what the process will be for obtaining an agreement, and what the terms of the agreement will be. The terms may include, for example, NTI holding a direct interest in a project.

Under the standard terms, successful applicants, upon executing the new Exploration Agreement and submitting the first year's annual fees, will be granted the exclusive right to explore for minerals on the Exploration Area. In order to gain access to the land, however, the applicant must obtain a surface right issued by the Regional Inuit Association (RIA).

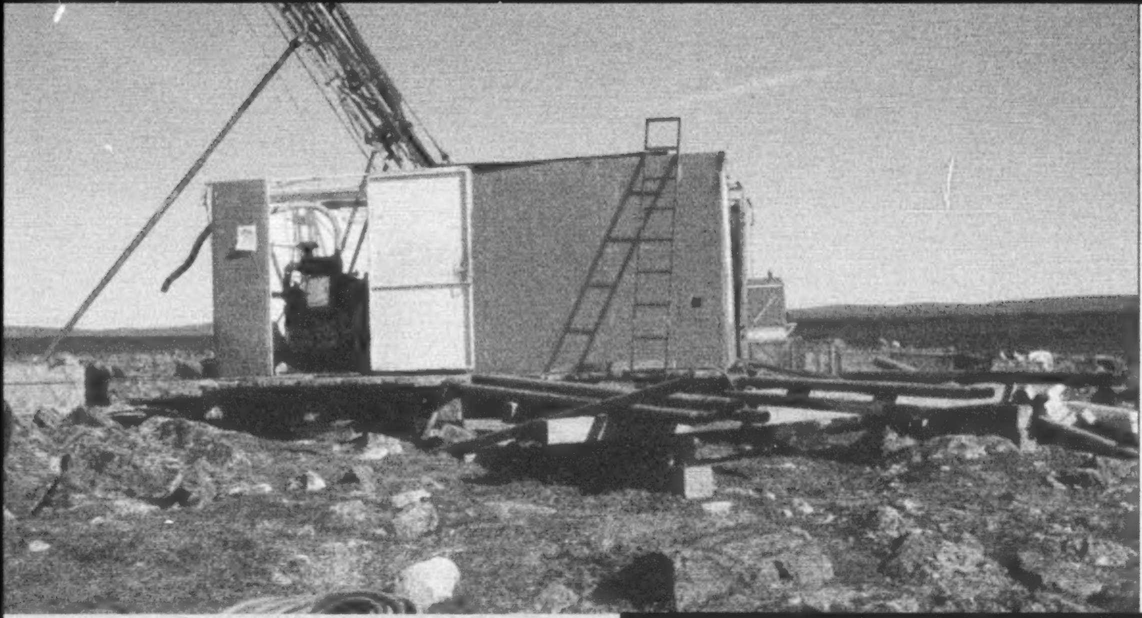
Holders of Exploration Agreements are required to submit annual exploration work reports to NTI that remain confidential for a period of up to three years

NTI Uranium Policy

In September 2007, NTI approved a Uranium Policy which will guide NTI's decisions regarding proposed uranium exploration and mining projects on NTI's mineral rights and on NTI's submissions to regulatory agencies regarding projects on Crown mineral rights. The policy states that NTI will support and allow uranium related activities as long as [illegible] meet the requirements listed in the policy. Those requirements are:

NTI Lands
PO Box 1269
Cambridge Bay, NU X0B 0C0
Fax: 867 983 5624

Website
www.ntilands.com



Geotechnical drilling in area of proposed Goose pit, Meadowbank Project.
PHOTO BY K. COSTELLO

1. The safe and peaceful use of nuclear energy.
2. Benefits to Inuit from mining and exploration.
3. Protection of human health.
4. Limited negative impacts of exploration and mining.
5. Participation of Inuit in the environmental assessment and operation of uranium projects.

The text of the uranium policy is available from NTI.

Some of the advanced exploration projects in Nunavut fall on subsurface IOL. The following table summarizes examples of active EA and their locations.

Mining Projects

The Doris North and Meadowbank projects have both recently received approval to proceed to construction and operation. Both are currently undergoing construction.

Zinifex's High Lake project, consisting of the High Lake Deposits (the West Zone which is on IOL) has begun the permitting process. Another project, Ulu, involves a grandfathered lease.

Baffinland's Mary River iron project, located on a grandfathered lease, has received the permitting required to conduct a bulk sample and will ship it out in summer, 2008. ■

PROJECT/DEPOSIT	HOLDER(S)
QIKIQTANI REGION	
Piling Project[1]	Commander Resources Ltd.
Melville	Comaplex Minerals Corp.
KIVALLIQ REGION	
Meliadine[2]	Resource Capital Funds
Meadowbank[3]	Agnico-Eagle Mines Ltd.
Spi Lake	Comaplex Minerals Corp.
Square Lake	Comaplex Minerals Corp.
Sedna	4579 Nunavut Ltd.
Cache	Full Metal Minerals
KITIKMEOT REGION	
Hope Bay[4]	Miramar Mining Corporation
Contwoyto	Tahera Diamond Corporation
Hood River	Tahera Diamond Corporation
High Lake[5]	Zinifex Canada Inc.
Muskox[7]	Adriana Resources Inc.
Arcadia Bay	Full Metal Minerals
Rockinghorse[8]	Kennecott Canada Exploration Inc.
Strongbow	Strongbow Resources Inc.

Note: All projects referenced below are discussed in this report.

1. Overall project involves Crown land and subsurface IOL.
2. The project involves land held under NTI EAs as well as grandfathered claims and leases.
3. The project involves land held under NTI EAs and grandfathered leases.
4. The Boston deposit is located on surface IOL, while the Doris, Madrid, South Patch, Naartok and Suluk are on subsurface IOL, distributed among grandfathered leases and NTI EAs. Potential extension of the Boston deposit down-dip or along strike to the north will also be on subsurface IOL.
5. The project involves Crown land and land held under NTI EAs and grandfathered leases.
6. The project involves Crown land, surface IOL, and subsurface IOL under NTI EAs.
7. The project involves Crown land, surface IOL, and subsurface IOL under NTI EAs.
8. Near the edge of the project referred to later in this report.

NTI LANDS STAFF CONTACT INFORMATION ON MINERALS, OIL AND GAS

Carson Gillis	Director of Lands and Resources	867 983 5600	cgillis@ntilands.com
Keith Morrison	Administrative Geologist/ Acting Senior Advisor, Minerals, Oil and Gas		kmorrison@ntilands.com

Canada – Nunavut Geoscience Office

The Canada – Nunavut Geoscience Office (CNGO) is a partnership between the GSC, INAC, and the GN's EDT. The mandate of the CNGO is to gather, interpret and disseminate geoscience data in support of responsible development of mineral and energy resources, to provide Geographic Information System (GIS) and cartographic expertise, provide training opportunities for young geologists and Inuit, and to promote geoscience education. In 2007, the CNGO participated in multi-component field-based projects, funded a regional geophysical survey, is a principal partner in development and implementation of a web-based system of data delivery *(Nunavutgeoscience.ca)*, provided GIS and cartographic support, and participated in outreach and community consultation activities.

CNGO Projects

CNGO projects are anticipated to improve the quality of life for Nunavummiut by allowing them to derive economic and social benefits resulting from responsible development of mineral and energy resources. The purpose of each project is to increase and/or sustain current levels of exploration in the regions studied by providing new data and ideas intended to reduce geologic risks of investment and improve chances for successful discoveries by mineral and energy exploration companies. Projects are designed to address critical geoscience knowledge gaps, to develop new geologic and exploration models, and make a significant contribution to the geoscience knowledge base of Nunavut. The projects are multi-faceted and may consist of components of ground-based field activities, including bedrock and surficial mapping, geophysical,

CNGO Southampton Island base camp.
COURTESY CNGO

Canada — Nunavut Geoscience Office
626 Tumiit Plaza,
Suite 202
PO Box 2319,
Iqaluit, Nunavut X0A 0H0

Telephone: 867 979 3539
Fax: 867 979 0708

Website
www.nunavutgeoscience.ca/cngo

Nunavut Geoscience Data
www.nunavutgeoscience.ca

geochemical and geochronological studies, and comprehensive data compilation activities. In addition, the field-based projects include components of community consultations and public outreach activities. The outreach activities are intended to demonstrate the importance of mineral and energy resources, to provide awareness of employment opportunities in geoscience, and to promote Earth science education for students.

The Southampton Island Integrated Geoscience Project

The Southampton Island Integrated Geoscience Project (SIIG) included regional-scale bedrock and surficial mapping in the central and eastern parts of Southampton Island, northwest Hudson Bay (Kivalliq District; parts of NTS map areas 46B, C, F and G). These activities, co-managed by the CNGO and the GSC, are intended to enhance mineral exploration and development opportunities in the region by improving the level of geoscience information. The area is underlain by supracrustal and intrusive rocks that may have exploration potential for base-metal mineralization. In addition, the island may have potential for diamond exploration.

As part of the SIIG project, central and eastern Southampton Island were covered by an aeromagnetic survey during the 2007 field season. In addition, geophysical characterization of potential crustal- and lithospheric-scale structures by magnetotelluric and teleseismic studies (ongoing, multi-year studies) were carried out in 2007.

SIIG Bedrock Mapping (Precambrian Geology)

Studies of the Precambrian geology were led by Joyia Chakungal (CNGO) and Mary Sanborn-Barrie (GSC). Their work, including 1:250,000-scale mapping of >15,000 km^2, has shown the Precambrian geology of the central part of the island to be comprised of a sequence of high-grade metasedimentary rocks of presumed Paleoproterozoic age. The supracrustal rocks are cut by a layered, ultramafic — mafic plutonic suite including peridotite, gabbroic anorthosite, gabbro and diorite. The supracrustal and ultramafic – mafic rocks are cut by voluminous, felsic plutonic rocks having a variety of compositions and demonstrating, at least locally, that they were metamorphosed to granulite facies.

In contrast, northern Southampton Island, which is separated from the central domain by an east-west striking shear zone, consists of structurally complex, intrusive rocks having abundant mafic xenoliths. These rocks are cut by younger hornblende-bearing monzonitic rocks. In the southwest part of the island, a Precambrian inlier of metamorphosed mafic intrusive rocks and tonalite is apparently lacking in the granitic rocks which are ubiquitous in the northern and central regions. The preliminary data suggest the Precambrian architecture of the island may consist of a central high-grade block bound by a lower grade block to the north, and potentially 'exotic' block to the south. Geochronological and geochemical studies are in progress.

SIIG Surficial Mapping

Surficial mapping studies were led by Martin Ross of the University of Waterloo. The surficial activities included examination and documentation of the glacial features of the island, and reconnaissance-scale sampling (approximately 10-km spacing) of glacial and post-glacial sediments for kimberlite indicator mineral (KIM) and geochemical analyses. The samples consist mainly of subglacial till, but glaciofluvial and alluvial sediments were also sampled from eskers and alluvial bars, respectively. Most sampling stations (approximately 150 in total) are located over the area underlain by Precambrian rocks. This area was largely unaffected by post-glacial marine reworking, and although physical weathering and other periglacial modifications are ubiquitous, small-scale glacial erosional forms including glacial striae, roches moutonnees, whaleback forms and rock drumlins are relatively abundant. This is especially evident along the north coast where Precambrian rocks form significant exposures. Fluted landforms over unconsolidated sediments are common over areas underlain by

CNGO geologist Dr. Shunxin Zhang and Kyle Netser visit outcrops of Lower Paleozoic rocks, Cape Donovan, Southampton Island.

COURTESY CGNO

Paleozoic rocks. However, carbonate dispersal trains associated with elongated fluted landforms also occur on the lowest portion of the Precambrian terrain.

Work in 2007 suggests that a complex system of ice stream tributaries developed over the lowland portion of the island during deglaciation, whereas the higher part of the island was much less connected to the regional glacial dynamics of northern Hudson Bay. This small area of the Laurentide Ice Sheet is probably best described as a local stationary dome. The latter evolved into a remnant ice cap with small lobes in the main valleys before it completely vanished.

Southampton Island Aeromagnetic Survey

Prior to 2007, Southampton Island was entirely lacking in aeromagnetic data. To address this data gap, to provide invaluable data to the SIIG bedrock mapping team, and to add to the public geoscience knowledge base, an aeromagnetic survey was flown over central and eastern Southampton Island in 2007. Results of the 46,000 line-kilometre survey, available as GSC open file maps and data sets, should be offered for public release early in 2008.

The Boothia Mainland Project

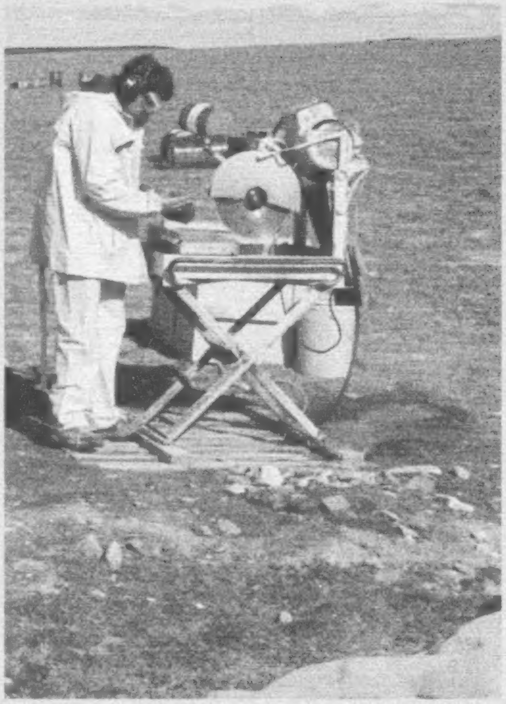
The Boothia Mainland project is a joint GSC – CNGO project led by Jim Ryan (GSC Vancouver). Field work in 2007, including bedrock and surficial mapping, represents northward continuation of mapping initiated in 2005 in NTS map areas 57A and B. In the 2007 field season, approximately 13,000 km^2 of NTS areas 57 C and D were mapped at a scale of 1:250,000. The Boothia mainland area is being actively explored by several diamond exploration companies.

The Boothia Mainland area forms part of the north-central Rae domain of the Churchill province. The study area comprises a high-grade gneissic terrain dominated by Neoarchean metaplutonic rocks, lesser Archean and Paleoproterozoic supracrustal sequences, and migmatitic gneiss. The 2007 study area includes several kilometric-scale, discontinuous belts of supracrustal rocks; the most extensive being a variably exposed NE-striking, 10-km wide x 150-km long panel. The supracrustal belts comprise mafic to intermediate metavolcanic rocks, pelitic to psammitic paragneiss, and local iron formation. Gossanous rocks are common in the supracrustal belts, and a metre-scale lens of pyrite-dominated massive sulphide was discovered in a granulite-facies gossan. The supracrustal belts have exploration potential for base-metal mineralization.

Reconnaissance-scale studies of the regional glacial history demonstrate that the 4-stage glacial history interpreted for the southern part of the project area (NTS areas 57 A and B) is consistent across the northern part of the Boothia Mainland area. Samples of till and from eskers are being analysed for kimberlite indicator minerals.

The Borden Basin Project

The Borden Basin project is a collaborative project between Elizabeth Turner of Laurentian University and the CNGO. The project, which was initiated in 2003, is intended to provide a regional context and new interpretations for base-metal mineralization in the Mesoproterozoic Milne Inlet Graben (MIG). The project involves a systematic re-investigation of all known Zn-Pb-Cu occurrences in the MIG. The Society Cliffs dolostone hosts the Nanisivik Zn-Pb deposit and numerous base-metal showings in the MIG. Understanding the formation's architecture and tectonostratigraphic history is essential to identifying controls on the spatial distribution of base metals in this district.



Cutting rocks at Southampton Island base camp.
COURTESY CNGO

Nunavut Energy Project

Oil Shales: Southampton Island

The Paleozoic geology of Southampton Island includes the northern margin of Hudson Bay Basin, one of the largest Paleozoic sedimentary basins in Canada. On Southampton Island, the Ordovician sequence includes occurrences of oil shales, although the exact stratigraphic positions of the shales, their number, and regional extent have been the subject of long-standing debate. In the 2007 field season, the oil shales of Southampton Island were systematically examined. This study is part of a larger-scale project led by Shunxin Zhang (CNGO) to re-examine the hydrocarbon potential of Hudson Bay Basin.

Web-Based Data Delivery:

Nunavutgeoscience.ca

Publicly accessible geoscience information is a vital tool used by resource exploration companies working, or planning to work, in Nunavut. Public geoscience information held in government offices assists companies to make strategic exploration and investment decisions. However, for geoscience information to have real value, it must be managed and web-disseminated to a global client base.

To disseminate Nunavut geoscience information through one authoritative website, the *Nunavutgeoscience.ca* project was initiated in October 2005. The project is a collaboration between the CNGO, INAC, Natural Resources Canada (NRCan), NTI and the GN.

Nunavutgeoscience.ca went on-line in September 2006 and currently operates a public website *(http://www.nunavutgeoscience.ca)* which hosts the NUMIN database (Nunavut Minerals Database reference query, Showings query and Gateway applications), as well as connections to the CNGO Website and the national Geoscience Data Repository (GDR) hosted by NRCan. Users can link to Mirage (map data) through GDR, accessing Nunavut specific geoscience maps made available for download by the Geological Survey of Canada and GEOSCAN, the bibliographic database for scientific publications of the Earth Sciences Sector of NRCan. ■

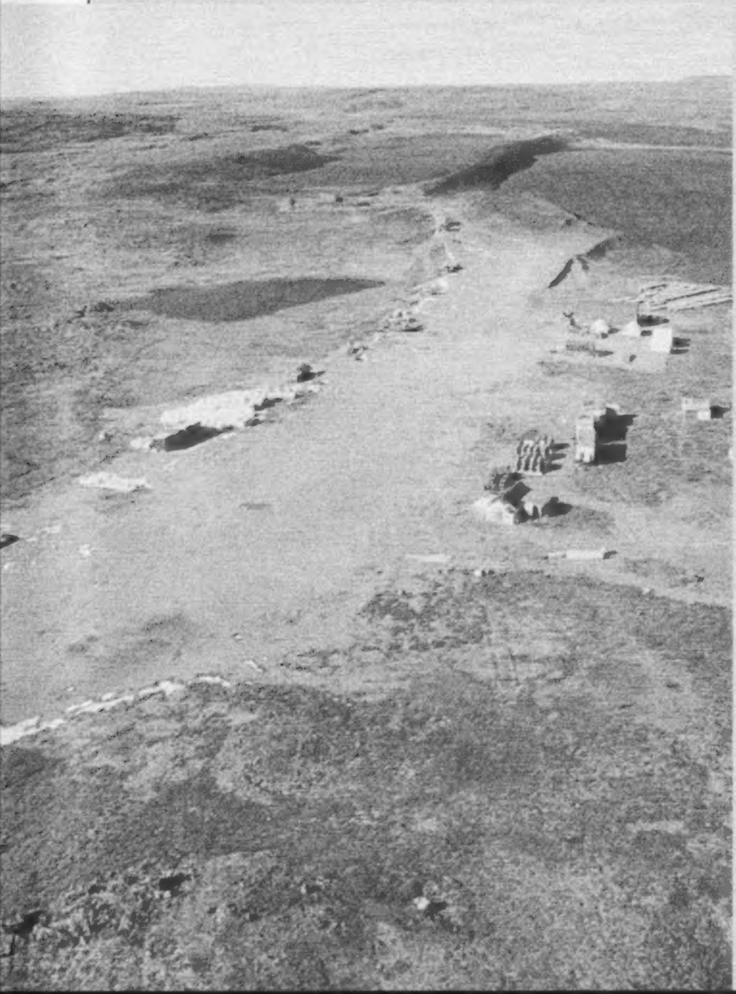
STAFF CONTACTS

Dr. Donald James	Chief Geologist	djames@nrcan.gc.ca
Kerry Brazel	Geoscience Data Delivery	kbrazel@nrcan.gc.ca
Dr. Joyia Chakungal	Bedrock Geology	jchakung@nrcan.gc.ca
Celine Gilbert	GIS Specialist	cgilbert@nrcan.gc.ca
Dr. Shunxin Zhang	Paleozoic Geologist	shzhang@nrcan.gc.ca

Summary of Exploration Activities 2007
Kitikmeot Region

Junior mining companies have been the driving force behind much of the exploration activity in the Territory in the recent past. However, in 2007, there was a definite increased presence of international major mining companies in Nunavut in both exploration work and by making strategic alliance agreements with the juniors. Specifically in the Kitikmeot region, Zinifex, an Australian base metal miner and one of the world's largest zinc and lead mining companies, and their Canadian branch, Zinifex Canada Inc., acquired Wolfden Resources Inc. for $388 million. With this acquisition, Zinifex took over Wolfden's numerous zinc and copper development and exploration projects. Newmont Mining Corporation, the world's second largest gold producer, entered into an agreement with Miramar Mining Corporation that provided for the all-cash $1.5 billion offer of acquisition by Newmont of all the outstanding common shares of Miramar. In June 2006, Cameco Corporation, the world's largest uranium producer, acquired 19.5 percent of UNOR Inc. and has maintained that percentage. UNOR is the operator on the uranium properties in the Paleoproterozoic Hornby Bay Basin, subject to the guidance of a joint UNOR/Cameco Technical Committee and the Strategic Alliance Agreement between the parties covering the UNOR operated projects.

George Lake camp. COURTESY DUNDEE PRECIOUS METALS



The Kitikmeot region spans the western and northern mainland of Nunavut, and parts of Victoria, Prince of Wales, King William, and Somerset islands. Kugluktuk and Cambridge Bay are the largest communities and provide services to exploration projects. Yellowknife, to the south in the Northwest Territories, is also an important logistical centre.

The Kitikmeot is geologically diverse and in 2007, there were over 60 active exploration projects. The commodities being sought include gold, diamonds, base and precious metals, and uranium. Past mines (Lupin, Ida Bay, Ida Point, Roberts Bay) in the western Kitikmeot have generally been small with the exception of the Lupin gold mine which produced over 3.1 million ounces of gold from 1982 to 2005.

Development plans for production at the Doris North gold deposit in the Hope Bay greenstone belt advance with plans to open the mine in late 2008. The George and Goose lakes gold deposits are the focus of an active advanced exploration program.

Nunavut's first diamond mine, the Jericho Diamond Mine, opened in 2006 and continued operation in 2007 with an expected mine-life of nine years. Diamond exploration covered parts of the western mainland and projects were active on Victoria and Prince of Wales islands. The Boothia Peninsula and areas south of Kugaaruk in the eastern Kitikmeot continued to have strong exploration activity with new kimberlites identified in this area again in 2007.

A number of advanced massive sulphide-hosted base metal exploration projects in the Kitikmeot region include Gondor, High Lake, Hood, Izok Lake (all base metals) and the Ulu gold deposit. The High Lake deposit is currently in the environmental assessment process towards mine development. The Hackett River exploration silver-zinc deposit also continues to advance.

Uranium exploration in the Paleoproterozoic Hornby Bay Basin continues with several exploration companies working on projects ranging from grassroots exploration efforts to well-developed drill programs. ■

ANIALIK PROJECT BASE METALS (RUN LAKE, RUSH)

Operator
North Arrow Minerals Inc.

Commodities
Copper, Zinc

NTS
76M/06

Location
150 km southeast of Kugluktuk

In May 2007, North Arrow Minerals Inc., a newly formed incorporated subsidiary of Strongbow Exploration Inc. with a unique exploration agreement with NTI, acquired the Anialik base metals property (Rush, Run Lake) from Strongbow. Historical exploration work and drilling reports 70 drill holes in the entire greenstone belt with 48 holes drilled in the Run Lake Volcanogenic Massive Sulphide (VMS) showing. Shallow holes drilled within a sequence of felsic to mafic volcanics returned Cu values ranging from 0.30% to 3.85% over widths of 1.4 to 7.6 m. Mineralization intersected during deeper drilling in the 1990s of the Run Horizon returned values of 1.7% Cu and 8.1% Zn over 0.4 m. This mineralization remains open to depth and requires further drilling below a 22.5 m section grading 0.91% Cu. North Arrow considers both these VMS showings to be drill-ready and is evaluating plans for the 2008 season.

CANOE LAKE PROJECT (CANOE LAKE SHOWING)

Operator
North Arrow Minerals Inc.

Commodities
Copper, Zinc, Silver

NTS
76M/0[illegible]03

Location
190 km southeast of Kugluktuk

North Arrow Minerals Inc. acquired the Canoe Lake Project (Canoe Lake base metal) from Strongbow Exploration Inc. in May 2007. This project is located within the High Lake greenstone belt. Historical drilling intersected mineralization at depths of up to 50 m in felsic and intermediate volcanics. Intersections included a 1.6 m section of banded sulphides assaying 89 g/t Ag, 5% Zn, 0.5% Pb and 0.8% Cu, stringer sulphides over 0.5 m of core grading 211 g/t Ag, 0.5% Zn and 1.8% Cu. A 2.9 m intersection of stringer and banded sulphides yielded 24 g/t Ag, 1.7% Zn, 0.2% Pb and 0.2% Cu. Geological mapping has outlined exposure of alteration and related stringer sulphide mineralization over an area of 500 m by 200 m. In 2005 a grab sample of siliceous rhyolite approximately 2 km north of the Canoe Lake showing assayed 0.063% Cu and 4.12% Zn. This mineralization is coincident with HLEM and UTEM conductors with a strike length of 600 m. An earlier 4 m chip sample returned values of 1.3% Cu, 6.9% Zn, and 130 g/t Ag. North Arrow considers this showing to be drill-ready and is evaluating plans for the 2008 season.

140m
143m
146m

Massive sulphides in the Discovery Hole at Izok Lake.

PHOTO BY L.HAM

GONDOR[1], HOOD[2]

Operator, Partner
Zinifex Canada Inc.[1,2], Xstrata plc[2]

Commodities
Copper, Lead, Zinc

NTS
76E/12[1]; 86I/02[2]

Location
290[1] km and 220[2] km southeast of Kugluktuk

The Gondor Deposit contains a high-grade core (historical resource of 4,380,000 tonnes of 0.1% Cu, 1.2% Pb, 9.7% Zn, 0.78 g/t Au and 64.6 g/t Ag). The Hood Deposit is located north of Izok Lake and is host to several deposits. Both Gondor and Hood deposits are considered by Zinifex to be potential supplementary ore sources for Izok Lake, with Gondor particularly having the potential to be a substantial deposit in its own right. The deepest hole drilled into Gondor returned 20.4 m grading 10.4% Zn, 1.6% Pb, 0.5 g/t Au and 79.4 g/t Ag. The deposit is open for expansion in all directions. In 2007, aerial geophysical survey work identified over 45 targets for ground follow-up in 2008.

HIGH LAKE

Operator, Partner
Zinifex Canada Inc.

Commodity
Copper, Zinc, Gold, Silver

NTS
76M/07

Location
175 km southeast of Kugluktuk

With the purchase of Wolfden Resources Inc.'s properties, Zinifex (the parent Australian company) increased its zinc and copper resources by 27% (in equivalent zinc terms) by adding 32.1 million tonnes of resources containing 7.7% zinc, 2.4%

copper, 0.8% lead and 70 g/t of silver to their resource holdings.

The High Lake Cu-Zn-Ag-Au deposit is the most advanced, in terms of regulatory processes, of all Zinifex Canada Inc.'s projects in Nunavut. Wolfden submitted their comprehensive project proposal for the High Lake Project as a Draft Environmental Impact Statement (DEIS) to the Nunavut Impact Review Board (NIRB) and federal and territorial regulatory authorities in November 2006. This proposal was accepted for a Part 5 Review in June 2007. The next process currently underway is environmental assessment and technical reviews by regulatory officials and is expected to take 12-18 months to complete. Zinifex's current plan is to develop High Lake once the Izok Lake development is completed with possible first concentrate production in 2016. There will be continued exploration in the vicinity of High Lake to locate additional resources.

The High Lake property consists of 15 leases (1,710 ha) located mainly within a land claim on which both surface and subsurface rights belong to NTI. In June 2006, a preliminary assessment was completed with a resource of 17.2 million tonnes grading 2.25% copper, 3.35% zinc, 69.75 g/t silver, and 0.95 g/t gold. Mineralized zones are the AB, D and West Zones, Sand Lake, WW Zone and Cairo Zone.

Zinifex is proposing to develop this mine which is expected to operate for 14 years. Three ore bodies will be developed with the first two zones (A/B and D) mined by open pit, followed by underground operations. The third zone (West Zone) will be developed as an underground mine. Approximately 18.2 million tonnes of ore will be mined over the life of the mine, with roughly one-quarter from open pits and the remainder from the underground workings. Ore will be processed, including physical crushing and grinding, in an adjacent mill. The existing nearby Sand Lake airstrip will be upgraded to accommodate logistical and personnel transportation requirements. A 49 km temporary winter road and a 53 km all-season road are expected to connect the mine to a proposed marine terminal in Grays Bay on Coronation Gulf. Izok Lake is one of the highest-grade, undeveloped copper-zinc deposits in the world with an in-situ value per tonne of ore comparable to Zinifex's high-grade operating Rosebery mine in Australia. The Izok Lake Deposit is currently in the pre-feasibility stage of development with current resources of 14.8 million tonnes, with a zinc grade of 12.8% and a copper grade of 2.6%. Further exploration is expected to increase the resource. Zinifex Canada Inc. expects that Izok Lake will come into production in between 2011 to 2017 with an expected 10 year mine-life.

IZOK LAKE

Operator
Zinifex Canada Inc.

Commodities
Copper, Zinc, Lead, Silver

NTS
86H/10

Location
175 km southeast of Kugluktuk

The massive sulphide deposit occurs within Achaean-aged volcanic rocks of the Slave Craton. The near-surface deposits are hosted within a thick sequence of felsic pyroclastic, volcanoclastics, dacitic and basaltic flows, with sulphide-rich iron formations and turbiditic sediments. The felsic volcanics are intruded by dacite and gabbro dykes, both of which feed the overlying flows.

Mineralization occurs in a cluster of four zones, the North West, Central, North and Inukshuk. The proposed mine plan includes both open pit (the North West, Central and North zones) and underground (Inukshuk) operations. The Inukshuk lens remains open to the east and will be the subject of further drilling. A number of geophysical targets potentially indicative of massive sulphide bodies have been located near Izok Lake, and these will be drilled in 2007–08.

Studies of options for port and road locations, along with potential tailing locations, have begun and will lead to a prefeasibility study expected in 2008. Environmental baseline studies have commenced as part of the permitting process, and these will be incorporated into an Environmental Impact Statement expected to be submitted to regulators in 2010. First concentrate production could occur in 2014 if the development schedule proceeds as planned.

At a production rate of 1.4 million tonnes per annum, Izok Lake will produce approximately 140,000 tonnes of zinc and 30,000 tonnes of copper concentrates.

The Napaktulik property consists of 13,368 ha on NTI's IOL parcel (CO-40). This property is within a few kilometres of Zinifex's Hood deposit. Previous airborne geophysics (magnetic, electromagnetic) defined a drift-covered coincident magnetic/electromagnetic anomaly approximately 2,000 m long by 200 m wide. This anomaly represents a prospective base metal target.

NAPAKTULIK

Operator
North Arrow Minerals Inc.

Commodities
Copper, Lead, Zinc, Silver, Gold

NTS
86I/02

Location
220 km southeast of Kugluktuk

AMARUK

Operator
Diamonds North Resources Ltd.
Commodities
Diamonds, Nickel
NTS
57A, 56O
Location
45 km south of Kugaaruk

Located in the Pelly Bay Diamond District in the eastern Kitikmeot Region, Amaruk covers approximately 1.5 million ha and is defined by abundant indicator mineral kimberlite float occurrences spanning an area of approximately 80 km. In 2007, there were 17 new kimberlites discovered on the property, including Beluga-2 (near the Beluga-1 kimberlite drilled in 2006), Qavvik-2 through Qavvik-6, Tuktu cluster (Tuktu-5 through Tuktu-9), Ptarmigan and Umingmak. These additional kimberlites bring the total number on this property to 22 and their discovery suggests the potential for clustering of kimberlites in other areas of the region. Approximately 500 identified targets remain untested in this diamondiferous field.

Bulk sampling of kimberlite occurrences on the property are returning significant results. From the Qavvik-1 kimberlite, 606 diamonds were recovered from a 457 kg bulk sample. The Char and Qavvik-1 kimberlites returned 178 diamonds, including 6 macrodiamonds, from a 159.35 kg bulk sample. The Walrus kimberlite sample yielded 6 diamonds larger than 0.212 mm from a 388 kg sample and the Beluga kimberlite sample yielded 3 diamonds larger than 1.205 mm from 162.1 kg of sample.

In October 2007, Diamonds North Resources Ltd. discovered nickel mineralization in an outcrop in the Tunerk showing on the Amaruk property. Grab samples returned assays as high as 1.36% nickel, 0.21% copper and 0.07% cobalt. This sulphide-mineralized outcrop is approximately 20 to 30 m wide and slopes gently into an extensive low-lying area with no outcrop exposure. Associated with this showing is a 700 to 1500 metre-long magnetic anomaly with estimated widths ranging from 20 to 65 m. Additional similar anomalies and oxidized sulphide zones exist in the area. The Company is planning a detailed electromagnetic (EM) survey to better define drill targets for 2008.

BARROW

Operator, Partner
Indicator Minerals Inc.,
Hunter Exploration Group
Commodity
Diamonds
NTS
57A/07
Location
15 km south of Kugaarak

The Barrow property covers 44 mineral claims (45,986 ha) in the Pelly Bay Diamond District in eastern Kitikmeot. Barrow is one of Indicator Minerals Inc.'s key projects. In 2007, a ground geophysical program, covering 27 anomalies, was completed on the property with 11 high-interest targets recognised, including two that are proximal and directly up-ice of the diamond-bearing kimberlite boulder discovered on the property in 2005. Numerous lower-priority targets were also identified.

Detailed prospecting on the property concentrated on high-priority ground geophysical targets identified during the early spring program. Five targets were drill-tested in this initial campaign and no kimberlite was intersected. The second phase of drilling scheduled for spring 2008 will test the remaining high-priority targets.

Amaruk Camp, Spring 2007. COURTESY DIAMONDS NORTH

BLUE LAKE PROJECT

Operator
North Arrow Minerals Inc.
Commodity
Diamonds
NTS
86I/09, 86I/08, 86I/16
Location
180 km southeast of Kugluktuk

The Blue Lake diamond project was initially started after a review of publicly available till sampling data indicated a significant indicator mineral train on the property. In May 2007, Strongbow Exploration Inc. and North Arrow Minerals Inc. completed an agreement whereby a number of properties, including Blue Lake, were transferred to North Arrow Minerals Inc. This diamond prospect covers 669.7 ha on NTI's IOL parcel CO-44.

The property hosts a prominent kimberlite indicator mineral train, within which till samples were collected by Strongbow in 2003 and 2004. The mineral train abruptly ends suggesting a bedrock source for these minerals is likely. The Blue Lake property contains untested magnetic and electromagnetic anomalies with kimberlitic-type signatures.

BRSC/WM

Operator, Partner
Nordic Diamonds Ltd.
Commodity
Diamonds
NTS
76L
Location
North of Contwoyto Lake,
350 km southwest of Cambridge Bay

A detailed ground geophysical survey consisting of magnetics, HLEM and gravity surveys was performed in areas up-ice from favourable geochemistry identified by two indicator mineral trains. Additional detailed till sampling successfully confirmed an abundance of kimberlite indicator minerals and kimberlite fragments were also discovered in several samples. Nordic Diamonds Ltd. had anticipated drilling several high-priority drill targets in the fall of 2007, but due to unavailability of a drill and imminent bad weather, drilling has been postponed until the spring of 2008.

CHARTRAND LAKE

Operator, Partner
De Beers Canada Inc.,
Pure Diamonds Exploration Inc.
Commodity
Diamonds
NTS
57C/10 through 57C/15, 57F/04,
57F/05, 57F/12
Location
Boothia Peninsula,
45 km northwest of Taloyoak

Chartrand Lake consists of 22 permits (571,407 ha) located on Boothia Peninsula northwest of Taloyoak. Exploration carried out during 2007 included an aeromagnetic survey, confirming potential targets and till sampling.

DARBY

Operator, Partner
Teck Cominco Limited,
Indicator Minerals Inc.,
Hunter Exploration Group
Commodity
Diamonds
NTS
56N/06, 56N/11
Location
120 km southwest of Kugaaruk

In 2006, the Darby Project included more than 160,000 ha of 77 mineral claims and six prospecting permits. In January 2007, Indicator Minerals Inc. acquired an additional 218,530.25 ha of claims adjacent to the main project area. With an $8.5 million budget for 2007, Teck Cominco is currently the operator and has incorporated an additional 110,074.5 ha into the optioned Darby Project.

The 2007 exploration program included the acquisition of more than 16,000 line-km of detailed airborne geophysical data and the collection of more than 986 till samples. A preliminary interpretation of the data has identified several high-priority targets that will be drill-tested in 2008.

Drilling during 2007 discovered four new kimberlites increasing the total number on the property to nine. Three of the new kimberlites are diamondiferous. A total of 32 new targets were drill-tested, and one hole was drilled into the diamondiferous Iceberg kimberlite, targeting a large untested area of this body.

Thirteen diamonds were recovered from a 171.6 kg bulk sample from the DR042 kimberlite with the two largest stones being greater than 0.15 mm in two dimensions. Two diamonds were recovered from a 278.7 kg bulk sample from the DR034 kimberlite and one diamond was recovered from a 66.9 kg sample of the DR093 kimberlite. No diamonds were recovered from a 109.4 kg sample of the DR036 kimberlite. A 411.8 kg bulk sample from a previously untested portion of the 11 ha Iceberg kimberlite yielded 10 diamonds, with the largest stone exceeding 0.3 mm in two dimensions. This work establishes that there is a field of diamond-bearing kimberlites on the Darby property.

Dwarf Fireweed,
Paunnat in Inuktitut,
Chamerion latifolium in Latin.

GRAIL

Operator
Indicator Minerals Inc.,
Hunter Exploration Group
Commodity
Diamonds
NTS
57F/01, 57F/02, 57F/03, 57F/06, 57F/07
Location
70 km northwest of Taloyoak

Indicator Minerals Inc. and Hunter Exploration Group's grassroots Grail Project, consisting of the Sanagak property and the Mayo property, has 16 prospecting permits and 42 mineral claims totalling 464,858 ha.

The 2007 exploration program, conducted predominantly over the Sanagak property, included a detailed airborne geophysical survey over a small portion of the project thought to be the source area for one of the diamond indicator mineral anomalies. Several anomalies were selected from the preliminary airborne data to be surveyed with ground geophysics. A summer program of heavy mineral sampling was conducted to further delineate the areas where kimberlite indicator minerals have been recovered.

HEEQOU

Operator
Diamondex Resources Ltd.

Commodity
Diamonds

NTS
86I/01, 86I/02, 86H/15, 86H/16

Location
225 km southeast of Kugluktuk

In July 2007, Diamondex Resources Ltd. completed the acquisition of Trigon Exploration Canada Ltd. and acquired all of the Trigon's diamond properties in Nunavut. Diamondex Resources' Heeqou Property consists of 56 mineral claims covering 51,146.2 ha. The property is located 40 km southeast of the Anuri kimberlite pipes and 30 km west of the Rockinghorse kimberlite cluster. The company has not reported on work completed during 2007.

Till sampling on Baffin Island.
COURTESY DIAMONDEX

HEPBURN PROJECT

Operator
Diamonds North Resources Ltd.

Commodity
Diamonds

NTS
86J, 86K

Location
150 km south of Kugluktuk

Located on the border between Nunavut and the Northwest Territories, the Hepburn Project covers 607,028.5 ha of the western Slave Craton. Approximately 30% of the property has been surveyed using airborne geophysics and 116 of 204 targets identified have been surveyed in greater detail. The remaining 70% of the property is currently being explored. A total of 21 geophysical targets over an area of about 70 km have been drill-tested without intersecting kimberlites although there are still high-priority targets yet to be tested.

HOOD RIVER CLAIMS

Operator, Partner
Tahera Diamond Corporation

Commodity
Diamonds

NTS
76L/13

Location
225 km southeast of Kugluktuk

The diamondiferous Tenacity kimberlite, with a surface expression of approximately 80 m by 100 m, was discovered on the Hood River property in 2000. A soil-sampling program was carried out in the summer of 2007 but results of this work have not been released by the company.

IC

Operator, Partner
Diamondex Resources Ltd.,
Stornoway Diamond Corporation

Commodity
Diamonds

NTS
56P/10, 56P/11

Location
90 km southeast of Kugaaruk

In July 2007, Diamondex Resources Ltd. completed the acquisition of Trigon Exploration Canada Ltd. and acquired the IC property and five other properties considered to have potential to host diamonds. The IC land package is comprised of 73 claims covering 71,234.8 ha. The company is presently processing samples collected in 2006 and will base future exploration work on assay results.

JERICHO DIAMOND MINE

Operator, Partner
Tahera Diamond Corporation,
Teck Cominco Limited

Commodity
Diamonds

NTS
76E/14

Location
350 km southwest of Cambridge Bay

In 2006, Tahera Diamond Corporation opened the Jericho Diamond Mine. This mine is the first diamond mine in Nunavut. In 2007, Tahera increased their production grade to approximately 0.90 carats/tonne and the value of production for the second quarter 2007 was $6.9 million. Production reached its peak in October, with 55,000 tonnes processed at an average grade of 0.85 carat/tonne, producing 47,000 carats. However, financial losses were incurred by the mine and factors that contributed to the losses included unexpected operational difficulties, the appreciation of the Canadian dollar against the U.S. dollar, higher oil prices and the 2006 early closing of the ice road accessing the property which elevated transportation costs. The company has adopted a comprehensive financing and improvement plan to mitigate its losses.

During 2007, approximately 500 dry tonnes of material from the JD-03 kimberlite was collected and 3,746 diamonds larger than 0.85 mm, weighing 134.7 carats, were recovered, resulting in an average grade of 0.27 carats/tonne. These diamonds were valued at an average price of US$40 per carat. Based on the grade and value results of this bulk sample, no further exploration work is planned on the JD-03 kimberlite.

◊ PEREGRINE

Operator, Partner
Diamondex Resources Ltd.,
Stornoway Diamond Corporation

Commodity
Diamonds

NTS
86P/03, 86P/04, 86P/05

Location
90 km southeast of Kugluktuk

In July 2007, Diamondex Resources Ltd. completed the acquisition of Trigon Exploration Canada Ltd. and acquired Trigon's diamond properties in Nunavut. The Peregrine Property, located in the Coronation Diamond District of the north Slave Craton region of Nunavut, is composed of 61 mineral claims encompassing 62,493.2 ha. With the acquisition of Trigon, Diamondex focussed much of their activity in 2007 on this transaction.

◊ POLAR PROJECT

Operator, Partner
Tahera Diamond Corporation,
De Beers Canada Inc.

Commodity
Diamonds

NTS
76L/04, 86I/01

Location
225 km southeast of Kugluktuk

The Muskox kimberlite located 14 km west-southwest of Jericho Diamond Mine is situated on the companies' Polar group of claims. The kimberlite is a three hectare body and is located below a small lake with overburden thickness averaging approximately 35 m.

A small summer drill program was implemented in 2007 over several previously identified targets on the Polar property. Regional sampling, staking and geophysical surveying program was anticipated by late summer. During 2007, a soil sampling program was completed over target areas on the Polar claims. Results from a bulk sample from Muskox kimberlite will be released by the end of 2007.

◊ ROCKINGHORSE PROPERTY

Operator, Partner
Tahera Diamond Corporation,
De Beers Canada Inc.

Commodity
Diamonds

NTS
86I/10, 86I/11

Location
160 km southeast of Kugluktuk

The diamondiferous Anuri kimberlite was discovered on the Rockinghorse property in 2001. The drilling and interpretation of 3-D gravity and electromagnetic surveys suggest that the diamondiferous Anuri kimberlite is a multi-phase body that covers 3.5 ha and is made up of two lobes that coalesce into a single pipe near the surface. The western lobe measures approximately 225 m X 150 m with the eastern lobe interpreted to measure 100 m X 100 m.

A 17-hole drill program was completed on the Anuri kimberlite in 2007. From 4,029 m (3,500 m intersecting kimberlite), 25 tonnes of kimberlite were collected. Detailed core logging, processing and diamond recovery is scheduled to be completed by end of 2007. A ground geophysical program was also completed on the property and resulting magnetic data is currently being reviewed and interpreted with a number of geophysical anomalies identified. A soil-sampling program was also completed during 2007.

◊ SAKARI

Operator, Partner
Diamonds North Resources Ltd.,
Shear Minerals Ltd.

Commodity
Diamonds

NTS
56N/05, 56N/11, 56N/12

Location
190 km southwest of Kugaaruk

The Sakari Project located in the Pelly Bay Diamond District south of Kugaaruk covers 19,996.8 ha adjacent to Teck Cominco's and partners' Darby project. This property is owned and operated by Diamonds North Resources Ltd. with a 50% option agreement with Shear Minerals Ltd. In 2007 the partners budgeted $185,000, completed an airborne geophysical survey (1,930 km) and have confirmed 10 high-priority kimberlite targets through initial data interpretation. One earlier target selected from preliminary results and drill-tested with a reverse circulation drill did not intersect kimberlite.

SIKU

Operator, Partner
Diamonds North Resources Ltd.,
Shear Minerals Ltd.

Commodity
Diamonds

NTS
56N/05, 56N/07, 56N/10

Location
175 km southwest of Kugaaruk

The 184,132 ha Siku Project is located within the southwest portion of Diamonds North Resources Ltd.'s Amaruk project. The property is owned and operated by Diamonds North with a 50% option agreement with Arctic Star Diamond Corporation. It surrounds Teck Cominco's and partners' Darby project on three sides. The 2007 exploration program for Siku included airborne geophysics, ground geophysics over selected targets and drill-testing of high-priority targets. The airborne survey was completed at the end of August and results are currently under review. Drilling is anticipated on the Siku Project following the completion of an airborne geophysical survey.

TIM

Operator, Partner
Diamondex Resources Ltd.,
Stornoway Diamond Corporation,
Committee Bay Resources Ltd.

Commodity
Diamonds

NTS
56P

Location
115 km southeast of Kugaaruk

In July 2007, Diamondex Resources Ltd. completed the acquisition of Trigon Exploration Canada Ltd. and also acquired the TIM property as well as five other properties with potential to host diamonds. The TIM land package currently comprises 24 claims covering 32,147.8 ha. The 2007 exploration program consisted of the processing of till samples collected in 2006.

UALLIQ

Operator, Partner
Diamonds North Resources Ltd.,
International Samuel Exploration Corp.

Commodity
Diamonds

NTS
57A/05, 57A/06, 57A/11, 57A/12,
57A/14, 57B/01, 57B/08, 57B/09

Location
75 km west of Kugaaruk

The Ualliq property covers 445,154.2 ha and is owned and operated by Diamonds North Resources Ltd. with a 30% option agreement with International Samuel Exploration. The project borders Diamond North's Amaruk project where recent exploration results have confirmed the diamond potential of this region.

In 2007, a $1 million budget was approved for work on the property that included over 20,000 line-km of high resolution magnetic airborne surveying of the property. Over 100 kimberlite targets have been identified. The recovery of kimberlite indicator minerals from till samples identified a main anomaly extending over 60 km. Detailed geophysical surveying on up to 50 targets and drill-testing of up to 30 of the highest-priority targets is anticipated for 2008. Based on its location and the work conducted to date, the partners believe the Ualliq property has the potential to host multiple diamondiferous kimberlites.

VICTORIA ISLAND

Operator
Diamonds North Resources Ltd.

Commodity
Diamonds

NTS
77F/01 through 77F/03, 77F/06 through 77F/08, 77F/10, 77F/11, 77F/14 through 77F/16

Location
240 km northwest of Cambridge Bay

Diamonds North Resources Ltd. holds a 100% interest in its Victoria Island claims. This property, which hosts a reported 39 kimberlite occurrences, is trans-bordered with the Northwest Territories in central Victoria Island. The land holdings cover an estimated 127,071.3 ha in Nunavut.

Kimberlite occurrences and kimberlite trends identified on the property are the Galaxy, Jaeger, King Eider, Pintail, Sanderling, Sand Piper, Snow Bunting and Turnstone. More than 80% of the Victoria Island kimberlites are diamondiferous, with several bodies returning significant diamond counts and favourable stone size distribution, illustrating the potential for high-value deposits.

Diamonds North Resources Ltd. suggests that on a conceptual basis, the King Eider kimberlite has the potential of attaining 4 to 5 million tonnes. Other important targets include the Snowy Owl kimberlite and the Southeast Galaxy trend. Diamonds North will continue to evaluate the potential for smaller, high-valued deposits on Victoria Island.

Amaruk base camp for Diamonds North exploration acitvities.
COURTESY OF DIAMONDS NORTH

Energy Sources
Uranium

ASIAK RIVER

Operator
UNOR Inc.
Commodities
Uranium, Diamonds
NTS
86J/10 through 86J/16, 86K/01, 86N/01, 86O/03, 86O/04
Location
50 km southeast of Kugluktuk

The Asiak River property consists of a single large claim block with a total of 90 claims and leases covering 89,700 ha close to the edge of the Hornby Bay Basin. UNOR acquired this property from 1996 to 1998 and since 2003, has spent $5 million on exploration. Nineteen diamond targets and four uranium showings including Tara West, Little Grey Owl Lake and Asiak Island have been identified on this claim block. In 2007, UNOR conducted 35.7 km of ground geophysics on the Asiak project and 25 detailed magnetometer grids were completed over magnetic targets on both the Asiak and Coppermine properties.

Radioactive Lady Nye Formation. COURTESY UNOR

BATHURST INLET

Operator
Rockgate Capital Corp.
Commodities
Uranium, Selenium, Silver
NTS
76G/15, 76J/02, 76J/03, 76J/05, 76J/06, 76J/12, 76K/09, 76K/16
Location
50 km south-southeast of Bathurst Inlet

Rockgate Capital Corp. has approximately 1,000 km^2 in the Pomy and Upits claims overlying the Proterozoic Kilohigok Basin along the regional Bathurst Fault near Bathurst Inlet. Grab samples by Cominco taken in the 1970s from the Pomy showings were reported to contain up to 4.35% U_3O_8 in the sandstone, 6.5% U_3O_8 in basalt with one trench sample returning 2.10% U_3O_8 over 4 m along the sandstone/basalt contact. The majority of mineralization is situated within the Proterozoic Brown Sound Formation basalt and at both contacts with sandstones. Exploration plans for 2007 included a 7,300 km radiometric airborne geophysical survey, detailed mapping and sampling, regional mapping and prospecting, analyses of known geophysical anomalies. Trenching sample results from the Upits claims returned gold values up to 141.0 g/t and 92.70 g/t with U_3O_8 values up to 0.29%. Trenching on the Pomy claims returned U_3O_8 values up to 2.121%, selenium values of 6.1% and silver values of 1,819 g/t. Lead concentrations up to 1.69% were also obtained from samples with concentrations of mercury and bismuth up to 220 ppm and 237.20 ppm, respectively. With the new acquisition of land holdings on the east side of the inlet, Rockgate now has 3 known uranium occurrences within the project area.

BEAR VALLEY

Operator, Partner
Adriana Resources Inc.,
UNOR Inc.
Commodity
Uranium
NTS
86J/14, 86N/01, 86O/03, 86O/04
Location
130 km southwest of Kugluktuk

The Bear Valley Uranium Project covers 350 km^2 along the eastern edge of the Hornby Bay Basin. This program was part of a larger exploration program that included work on the company's MIE Ni-Cu-PGE project and the UNAD joint venture project with UNOR Inc. Some of the permits and claims for the Bear Valley project are also joint-ventured with UNOR. Based on the results from the 2005-2006 exploration programs, Adriana Resources Inc. intended to focus the 2007-2008 drill program on its All Night Lake, Pointer Lake, and Tabb Lake target areas. In the All Night Lake area, prospecting work in 2006 discovered radiometric anomalies and a 16 by 6 km stratabound conductive horizon (Alpha Horizon) was delineated with this horizon located down-dip of the radiometric anomalies. Pointer Lake is characterized by radiometric anomalies in Archean basement granite overlain by Dismal Lakes Group sediments. The Tabb Lake area, a structurally-bounded, down-dropped block of Hornby Bay sandstones within metamorphic Paleoproterozoic basement rocks, also contains anomalous uranium values and historical drilling intersected uranium-enriched core. Original 2007 spending plans of a $2 million drill program on this property were largely deferred until 2008 because of the MIE project drilling which was the company's priority program. Prospecting, sampling and mapping were carried out as part of the summer field program.

CORHILL

Operator, Partners
Garuda Capital Corp.,
Garuda Ventures Canada Inc.,
Xemplar Energy Corp.,
Geotech Limited

Commodities
Uranium, Gold, Platinum

NTS
86K/14, 86K/15

Location
145 km southwest of Kugluktuk

In 2006, Garuda Capital Corp. and its subsidiary, Garuda Ventures Canada Inc., assumed a 70% interest in an agreement by Xemplar Energy Corp. with Geotech Limited whereby Geotech would conduct a heliborne geophysical survey (1518 line-km) over the Corhill uranium-gold-platinum property located on the Northwest Territories/Nunavut border south of Kugluktuk. This property is comprised of 18 mineral claims and covers 12,345 ha. The property holds potential for Athabasca Basin-type unconformity uranium deposits and the genetically related Coronation Hill-type mineralization in Australia with associated gold and PGEs. Although the property does not have any documented mineral deposits, preliminary exploration work was intended to determine the mineral potential. Results of the 2007 exploration program are not available at this time.

COPPERMINE RIVER

Operator
UNOR Inc.

Commodity
Uranium

NTS
86J/10 through 86J/14, 86K/16,
86N/01, 86O/04

Location
100 km south of Kugluktuk

The Coppermine Property consists of two blocks, the Coppermine Block and the East Block, with 226 claims and leases covering 126,100 ha in the Hornby Bay Basin. The Company acquired these claims from 1996 to 1998 and since 2003 has invested $27.6 million. The Coppermine property comprises the largest of several properties that UNOR is operating. In 2007, UNOR, with this flagship property and its other properties and joint ventures, explored 1.1 million ha for uranium mineralization, representing a 414% increase in holdings over 2006. The entire program in the Hornby Bay Basin for 2007 cost $7.0 million.

The Basin has significant potential for unconformity-type uranium deposits and is under-explored compared to the Athabasca Basin. The structural setting of the Coppermine property is similar to that of Cameco's Eagle Point deposit of the larger basin. Potential for other uranium deposit types include IOCG and vein-type deposits within the Hornby Bay Basin. UNOR has discovered several uranium zones on the property including Contact Lake, CM53, Wolf Creek, Bog, Hot Creek, Bluto Lake, Alteration Zone and a new showing, Beep.

In 2007, detailed mapping of the Mouse River graben and the CM 90/Bog Zone continued. The Hot Creek uranium showing in the north-central area of the claim block consists of numerous, large, mineralized (uranium-copper) sandstone boulders over an area 1.5 km long by 3 km wide. This boulder showing lies along the western margin of a major graben that displaces the Dismal Lake/Hornby Bay contact. This structural setting and style of mineralization is analogous to that of the Mountain Lake deposit operated by Triex Minerals Corporation and Pitchstone Exploration Ltd. located 40 km to the west.

A total of 6,316.7 m (22 drill holes) were drilled in which 419 core samples were assayed; results are pending. Early spring

Arriving at
Mouse Lake Camp.
COURTESY UNOR

drilling of 3,006 m (seven holes) was conducted with five holes drilled into the Hot Creek uranium structure. Three of these holes were drilled to test beneath the best footwall uranium occurrence of 0.10% U_3O_8 discovered in 2006. A deeper fourth hole was drilled to the north as a type stratigraphic section. This hole intersected the entire sedimentary package from the top of the dolomitic Dease Lake Formation to the base of the Lady Nye Sandstone. The fifth hole in the series was drilled approximately midway between the fence of three holes and the stratigraphic hole. A zone of anomalous radioactivity was encountered in a five metre interval and is the first documented radioactive drill intersection in the lower Leroux sandstone outside of the immediate vicinity of the Mountain Lake uranium deposit.

Two additional short holes were drilled to test magnetic targets for diamonds. These shorter holes intersected plugs of altered, magnetite bearing syenite and a zone of trachytic volcanics within the basement.

Geophysical work was completed over magnetic targets on both the company's Asiak and Coppermine Properties. EM surveying was completed over four MEGATEM conductors on the Coppermine Property and four conductors were also surveyed by Stepwise Moving Loop Time Domain Electromagnetic Surveys, a technique developed by Cameco Corporation to identify deep conductors in the Athabasca Basin. Under the Joint Technical Committee Agreement with Cameco, the two companies are processing this data to identify uranium drill targets. A MaxMin survey completed over the southern extensions of the Wolf Creek zone delineated two strong conductors in the basement that will require drill-testing. On the Coppermine property, the Lac Rouviere property and adjacent UNAD property, approximately 30,000 km of Fugro airborne gamma-ray/magnetometer surveying at 150-metre line-spacing was also flown in 2007. Cameco and UNOR are interpreting the results and actively generating the program for 2008.

Local sik sik. PHOTO BY K.COSTELLO

DISMAL LAKE PROPERTY[1]; DISMAL LAKE WEST[2]; KENDALL RIVER[3]; MOUNTAIN LAKE[4]; MOUNTAIN LAKE OPTION[5]

Operator, Partner
Triex Minerals Corporation,
Pitchstone Exploration Ltd.

Commodity
Uranium

NTS
86N/05[1], 86N/06[1], 86N/11[1], 86N/12[1], 86M/08[2], 86N/01[3], 86N/02[3,4,5], 86N/03[4,5], 86N/06[4,5], 86N/07[4,5]

Location
100 km west and southwest of Kugluktuk

Triex Minerals Corporation and Pitchstone Exploration Ltd. recently announced the formation of a joint venture for their four properties in Nunavut located in the Hornby Bay Basin. The companies have acquired all claims on the Mountain Lake, Dismal Lakes and Kendall River properties which had been under option by various companies over the years. All these properties comprise approximately 223,000 ha and are in the proximity of the Mountain Lake uranium deposit, also located on Triex's and Pitchstone's property.

On the Kendall River property, pursuant to an Option to Purchase Agreement with Aramis Ventures Inc., the Triex-Pitchstone joint venture has purchased 100% ownership, subject to a royalty. Four claims (4,180 ha) comprise this property. Surface work on the property in 2006 and 2007 defined targets related to a train of radioactive boulders discovered in the 1970s. Sandstone boulders in this Kendall River train are from the same unit of the Dismal Lakes Group that hosts the Mountain Lake Deposit. A total of 145 radioactive boulders, angular to sub-angular and containing disseminated uranium oxide minerals with minor pyrite and chalcopyrite, form a tightly defined northeast-trending train 3,400 m long and up to 230 m wide. A regional structure parallels the train immediately to the south. Work during 2007 included 388 line-km of airborne radiometrics flown at 200 m line-spacing, 124 line-km of ground magnetics at 200 m line-spacing, 1,200 soil samples collected on 200 m line-spacing. The operators also conducted a prospecting and mapping program on the property during 2007.

On the Dismal Lakes and Mountain Lakes properties, pursuant to an Option to Purchase Agreement with Ur-Energy Inc., the Triex-Pitchstone joint venture has purchased 100% ownership, subject to a royalty, of 58 claims (52,464 ha) forming part of these properties. Pursuant to another Option to Purchase Agreement with Patrician Diamonds Inc. for 10 additional claims (7,295 ha) on the Dismal Lakes property only, the joint venture has purchased 100% ownership, subject to a royalty.

Old core from Mountain Lake Uranium deposit.
PHOTO BY L HAM

On the Dismal Lakes property, 2007 work included 698 soil samples, eight diamond drill holes with five on the western target and three on the eastern target. No continuous zones of significant radioactivity were encountered. Geophysical surveys included 140 line-km of resistivity, 730 line-km of airborne radiometrics flown at 200 m line-spacing, 100 line-km of ground magnetics at 200 m line-spacing. Soil samples (400) were also collected on 200 metre line-spacing and prospecting and mapping was also conducted.

Work during 2007 on the Dismal Lakes West Property (also referred to as the Sandy Creek property) included 11 diamond drill holes, boulder train prospecting, 943 soil samples, resistivity surveys, and preliminary baseline environmental studies including aquatic and wildlife surveys.

The Mountain Lake Deposit is 8.2 million pounds U_3O_8 (3,700 tonnes U_3O_8) of inferred resource in 1.6 million tonnes, with an average grade of 0.23% U_3O_8 using a cut-off grade of 0.10% U_3O_8 and a minimum thickness of 1.0 m. During 2007, three drill holes (477 m) were drilled, and further work included boulder prospecting, the collection of 1890 soil samples, a 70 line-km geophysical survey, preliminary baseline environmental studies (aquatic and wildlife) and preliminary uranium extraction studies.

Surface work in 2006 and 2007 on the Triex Pitchstone's joint venture's collective Hornby Bay Basin properties has delineated numerous targets. Some data collected from the western part of the Mountain Lake claim block in 2007 is still pending. Drilling by the joint venture partners to this point has focused on the Mountain Lake Deposit. Future work on the property will focus on testing identified regional targets.

LAC ROUVIERE

Operator, Partner
UNOR Inc., Cameco Corporation

Commodity
Uranium

NTS
86N/01 through 86N/06

Location
110 km southwest of Kugluktuk

The Lac Rouviere Option and Joint Venture with Cameco Corporation covers 206 claims (211,130 ha) that lie to the west of UNOR Inc.'s Coppermine Property. To earn their interest, UNOR must incur exploration and development expenditures of $3.0 million by March 31, 2010, of which a minimum of $2.0 million must be incurred on or before June 30, 2008. UNOR is the operator on this property, Coppermine, and Asiak properties, subject to the guidance of a joint UNOR/Cameco Technical Committee and Strategic Alliance Agreement.

In 1996, UNOR purchased BP Minerals' Lac Rouviere Property uranium database which also included data from the Kendall River property. In 2007, UNOR completed the digitization and interpretation of this data, including geological mapping (1:100,000 scale; 1:50,000 and 1:20,000), lake sediment and soil geochemistry, colour-IR photo coverage of the project area, airborne radiometric (magnetic, VLF electromagnetic, gamma ray spectrometry) surveys of the Lac Rouviere property and ground radiometric (scintillometer, radon, magnetometer, EM) surveys. Work this year discovered 14 new radioactive occurrences, identified and re-sampled 52 historical occurrences at different locations on the property, identified several conductors, located five uranium drill targets, completed 93.7 km of ground geophysics and collected surface rock samples for both assay and mineralogical studies. The most significant of the new occurrences is a one km-long conductive zone in a conglomeratic unit above the unconformity; this environment is similar to that of the Mountain Lake Deposit.

NORTHERN HEPBURN PROJECT

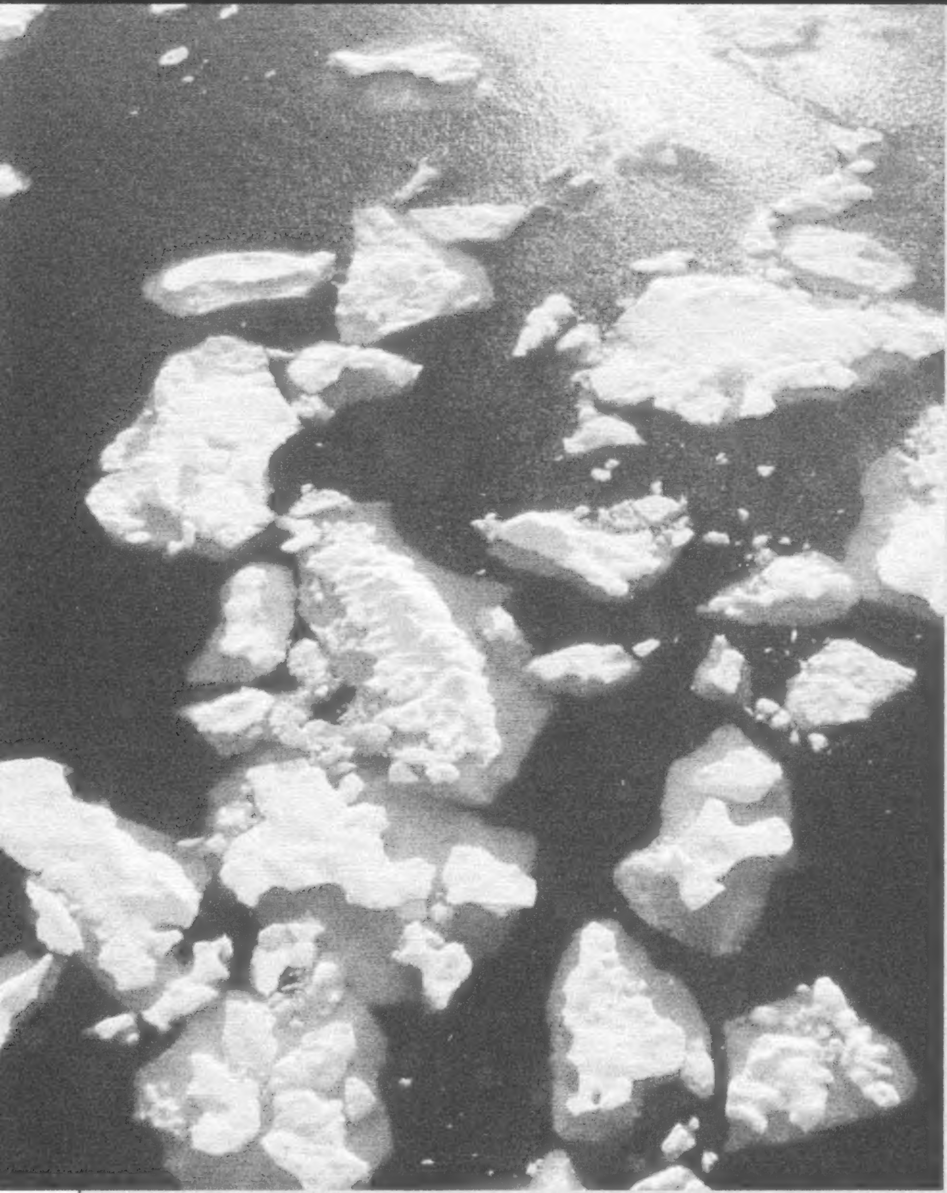
Operator, Partner
Uranium North Resources Corp., Diamonds North Resources Ltd.

Commodity
Uranium

NTS
86J, 86K

Location
On the Nunavut/Northwest Territories border, 150 km south-southwest of Kugluktuk

The Northern Hepburn project overlies segments of the Hornby Bay Basin. This project comprises trans-border properties between Nunavut and the Northwest Territories with the Northern Hepburn property within Nunavut. Diamonds North Resources Ltd. holds a 50% interest on five claims of the project. Six uranium occurrences with up to 0.82% U_3O_8 have been previously identified. At BB Lake, lake sediments have returned uranium values ranging from 23.7 ppm to 115 ppm U_3O_8. This is reported as the highest known uranium concentration in a lake sediment sample taken in the region.



Ice flows during break-up of Queen Maud Gulf.
PHOTO BY GN EDT

UNAD

Operator, Partner
UNOR Inc., Adriana Resources Inc.

Commodity
Uranium

NTS
86J/14, 86N/01, 86N/07, 86N/11, 86O/03, 86O/04

Location
90 km southwest of Kugluktuk

The UNAD Joint Venture is a 50/50 joint venture between Adriana Resources Inc. and UNOR Inc. covering 37,200 ha on 42 claims and leases that are located on the eastern edge of the Hornby Bay Basin. Two additional claims were staked in 2007 north of the Mountain Lake Deposit along a prominent fault zone. The majority of the claims lie to the west, north and east of the UNOR's Coppermine Property and also adjoin Adriana's Bear Valley and MIE projects. Five of the claims are located in the Kendall River area and these claims include several historic uranium occurrences including Munch Lake, Bear Valley, and Tabb.

Adriana Resources intended to direct approximately $350,000 of the uranium exploration budget towards its obligation under the UNAD Joint Venture. Prospecting work was undertaken in conjunction with work on UNOR's Lac Rouviere property and included prospecting, magnetometer/HLEM grid surveys over anomalies north of Kendall River and gamma ray/magnetometer surveys extended from the Lac Rouviere property over the UNAD property.

WASHBURN URANIUM

Operator/Partner(s)
Kaminak Gold Corporation,
Mega Uranium Ltd.

Commodity
Uranium

NTS
77D/14, 77E/04

Location
125 km northwest of Cambridge Bay

Kaminak Gold Corporation owns 100% of the 80,937 ha Washburn property and covers portions of the Proterozoic Elu Basin located on south-eastern Victoria Island, Nunavut. This uranium project is optioned to Mega Uranium Ltd. who has the right to earn a 55% project interest by making exploration expenditures totalling $1 million on or before December 31, 2010. Year 1 exploration expenditures are set at a minimum of $50,000 and must be made on or before December 31, 2007. The following years involve $200,000 in year 2, $350,000 in year 3, and $400,000 in year 4. Lake water sampling in the mid-1970s by Uranerz Ltd. identified anomalous uranium results near exposed unconformities. Government field mapping during the 1990s documented a basal "unconformity" separating overlying sandstones and conglomerates from basement rocks. Work in 2007 involved geological mapping and prospecting.

ANIALIK PROJECT GOLD (FRANK, FELICIA, LOCANNA)

Operator
North Arrow Minerals Inc.
Commodity
Gold
NTS
76M/05, 76M/06, 76M/11
Location
150 km southeast of Kugluktuk

North Arrow Minerals Inc. acquired the Anialik gold property with the Frank, Felicia and Locanna showings from Strongbow Exploration Inc. in May 2007. This project was the focus of Strongbow's exploration efforts in 2005. The Frank showing consists of pyrite gossans in discrete quartz. The Felicia showing consists of quartz-chalcopyrite veinlets in carbonate-altered intermediate to mafic volcanics. The Locanna gold prospect is characterized by deformed stockwork pyritic quartz veins that locally contain anomalous concentrations of gold. Mineralization occurs within a 300 m wide by 3000 m long corridor. Forty-seven of 146 prospecting samples collected along this corridor returned in excess of 1 g/t Au. At the Locanna showing, three samples returned values of 51 g/t Au, 33 g/t Au and 13 g/t Au. Channel sampling of three areas along a seven metre strike-length of one vein near the southern end of the corridor returned 14.4 g/t Au over 1.6 m, 51.2 g/t Au over 0.25 m, and 6.8 g/t Au over 1.18 m. At the Frank prospect, 31 grab samples were collected from a strongly altered (carbonate, quartz) corridor 100 m x 500 m with 15 samples returning values >1 g/t Au including 17 g/t Au, 16 g/t Au, 11 g/t Au and 8 g/t Au. Both the Locanna and Frank gold targets are considered drill-ready and North Arrow is evaluating plans for 2008.

CANOE LAKE PROJECT (BAMAKO SHOWING)

Operator
North Arrow Minerals Inc.
Commodity
Gold
NTS
76M/02, 76M/03
Location
135 km northwest of Bathurst Inlet

North Arrow Minerals Inc. acquired the Canoe Lake Project (Bamako gold showing), from Strongbow Exploration Inc. in May 2007. This showing is located approximately 1.7 km to the west of the Canoe Lake Project base metals showings. Exploration has identified three sub-parallel, near-vertical-dipping gold-bearing mineralized horizons within a 300 m stratigraphic interval. Mineralization is dominated by pyrrhotite with lesser amounts of pyrite and chalcopyrite and is characterized by zones of sulphide enrichment, pervasively brecciated quartz flooding and silicification within sheared mafic metavolcanic rocks. Surface samples have returned assays up to 54.4 g/t Au. Previous drilling of 6 shallow holes by BHP drilled in the 1990s returned significant results (15.3 g/t Au over 2.6 m). North Arrow considers the Bamako gold showing to be drill-ready and is evaluating plans for the 2008 season.

Gold mineralized boulder typical of Hope Bay belt.
PHOTO BY GN EDT

CHICAGO; DISCOVERY, TWIN PEAKS

Operator, Partner
Maximus Ventures Ltd.,
Miramar Mining Corporation*
(*please see the Hope Bay Project write up for the current status of Miramar Mining Corporation)
Commodity
Gold
NTS
76O/10, 76O/15
Location
160 km southwest of Cambridge Bay

Maximus Ventures Ltd. had an original option on the Eastern Contact and Twin Peaks target areas in Miramar Mining Corporation's Hope Bay project along the Hope Bay Belt with Miramar as the operator. In 2006, Maximus dropped the Eastern Contact area and added the Chicago area with the option property now covering 71 km^2. Required expenditures are $7.5 million to be incurred by April 30, 2009. At the end of July 2007, Maximus had spent over $4 million on this project.

Numerous gold exploration targets in the Twin Peaks block (Twin Peaks, Discovery showings) lie within zones of strong iron carbonatization and/or silicification. The Twin Peaks showing at the north end of the belt is hosted by argillaceous sediments and conglomerates that overlie volcanics and syenitic intrusives adjacent to a major lineament. Twin Peaks has been interpreted as having the potential to host similar large-scale gold deposits at or near the volcanic-sedimentary contact similar to targets from Miramar's Nartok-Madrid area a few kilometres to the north. Gold mineralization is accompanied by anomalous silver, copper, lead and zinc values. Planned work for 2007 included 6,000 metres of drilling equally divided between the Discovery and Twin Peaks properties.

The exploration targets at Chicago have potential for both gold and copper-zinc mineralization. Outcrops with coarse quartz vein stockworks have been found near the stratigraphic top of a felsic volcanic succession. On the Chicago property, 2,620 m (11 drill holes) were completed in order to locate high gold-silver shoots and to test the continuity and extent of a large gold-silver alteration system discovered in 2006 which returned values of 0.2 g/t Au over 108 m and 0.5 g/t Au over 82 m.

COMMITTEE BAY

Operator
Committee Bay Resources Ltd.
Commodity
Gold
NTS
56J, 56K
Location
300 km north of Baker Lake

The Committee Bay greenstone belt is over 300 km long and is believed by the company to be geologically comparable to the gold-producing greenstone belts of Red Lake, Timmins and Kirkland Lake. Committee Bay Resources Ltd. holds greater than 360,000 ha of land with prospective geology and controls over 85 per cent of the belt. The Committee Bay Project is the company's flagship project in Canada.

Along the Committee Bay greenstone belt, significant mineralization has been outlined at Antler, Inuk and Three Bluffs in the Kitikmeot region, and Anuri, Raven and West Plains in the Kivalliq region. The total number of zones with gold potential on the belt exceeds 40. The Three Bluffs Deposit, hosted within a folded iron formation, is in the central portion of the Committee Bay belt. A near-surface high-grade inferred mineral resource of 1.9 million tonnes at 8.0 g/t Au for 487,000 contained ounces has been defined from Three Bluffs. Using a lower cut-off grade, this inferred mineral resource is expanded to 5.1 million tonnes grading 4.0 g/t Au for 657,000 oz. About 85 per cent of these resources are within 120 m of surface.

Gold mineralization at Three Bluffs has been defined for at least one km along strike, with the greatest concentration of gold situated in a shallow east-plunging fold hinge of iron formation. High grade gold mineralization has also been identified in the limbs of the fold, to over 300 m below surface, and remains open to depth. Additional exploration potential exists to the west and at the high grade hinge zone, and may extend eastwards below a flat lying diorite intrusion.

As part of a $5.5 million program, a total of 4,546 m (27 drill holes) was drilled in the 2007. The main objective for the 2007 season was to confirm the widths and high grades of the Three Bluffs gold deposit and to upgrade the current Inferred Resource. Phase 1 of the program involved 3,500 m of drilling, followed by a further Phase 2 drilling of high priority targets. High grade gold intercepts within the southern limb extended known high grade mineralization and returned values of 9.29 g/t Au over 8.34 m and 8.02 g/t Au over 4.03 m.

The Inuk high grade gold prospect is located in the Kitikmeot region approximately 147 km northeast of the Three Bluffs Deposit. Drilling at Inuk intersected 11.18 g/t Au over 11 m and confirmed the continuity of wide, lower grade portions. Zones of mineralization are now open to depth and along a strike length of 700 m.

Drill at Anuri target on Committee Bay Project.
PHOTO BY L.HAM

Regional exploration in 2007 significantly upgraded the Anuri-Muskox-Maro target areas.

EAGLE

Operator
North Arrow Minerals Inc.
Commodity
Gold
NTS
76G/09, 76G/10, 76G/15, 76G/16
Location
145 km southeast of Bathurst Inlet

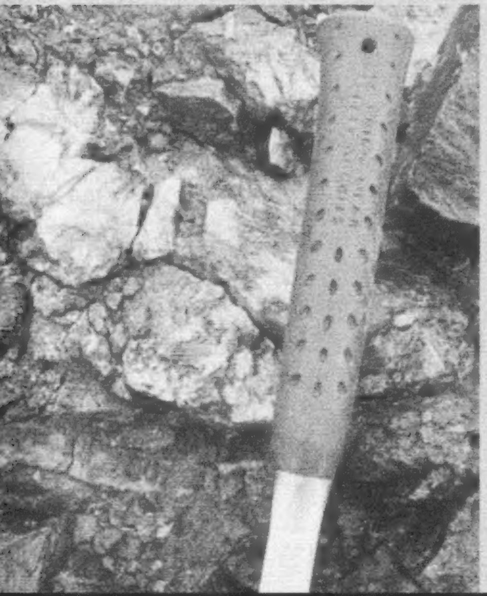
North Arrow Minerals Inc. acquired the Eagle gold property covering approximately 3,365 ha of NTI IOL from Strongbow Exploration Inc. in May 2007. This property hosts two known gold showings, Eagle and Ellice, and surrounds the Goose Lake and Boot Lake mining leases (Back River Project; Dundee Precious Metals). High resolution airborne magnetic surveys carried out by Strongbow suggest the presence of untested iron formation on the Eagle property. North Arrow is evaluating plans for the 2008 season.

GEORGE LAKE/GOOSE LAKE (BACK RIVER PROJECT)

Operator
Dundee Precious Metals Inc.
Commodity
Gold
NTS
76G/09, 76G/10, 76G/13, 76G/14
Location
100 km south of Bathurst Inlet

The Back River Joint Venture Project is an advanced exploration project which covers 390 km^2 of mineral rights, is owned and operated by Dundee Precious Metals Inc. and is one of the larger gold projects within Nunavut. The Back River deposits are quartz-vein hosted gold deposits found within Achaean banded iron formation within greywacke units folded into an anticline, with the apex of the fold forming a hinge zone near surface.

The most important properties of the Back River area are the George Lake and Goose Lake deposits. Recent updated resource estimates for the Back River Project have in-situ Indicated Resources of 3.415 million tonnes at 10.9 g/t Au (1.193 million oz Au) and Inferred Resources of 3.555 million tonnes at 10.2 g/t Au (1.161 million oz Au). This new resource estimate represents a 14% increase in resource tonnage and a 19% increase in contained gold (377,000 oz).



Well-developed arsenopyrite within gold-bearing banded iron formation from trench at George Lake.
PHOTO BY L. HAM

Gold mineralization occurs in both the high-grade fold hinge zone and greywackes within the fold core. Much of the gold occurs as fine grains on sulphide boundaries, although visible gold, generally as small (<1 mm) isolated specks, is common in clearly defined bands within the iron formation. Disseminated gold also occurs and associated minerals are arsenopyrite, pyrrhotite, pyrite, quartz and Fe-Mg-Al silicates.

Occurrences within the George Lake deposit area include Locale 1, Locale 2, Lone Cow, GH, Boot Lake, Boulder Pond, Needle Lake, Bath 1 claim and the Slave occurrences. Five showings comprise the Goose Lake deposit — Llama Lake, Round Pond, Goose Neck, Goose South (or Goose Lake showing) and Goose Tail. The priority for the 2007 drill program was the Lone Cow Pond South area, where 1.4 km of strike length was tested by 26 holes (10,473 m) with 200 m spacing for phase 1 drilling, followed by 100 m spacing.

Gold exploration in this area began in 1982 and various companies have worked the deposits. In early 2005, Dundee purchased the option to earn a 60% interest in the project and by year-end had invested $20.8 million. By mid-2006, the company purchased a 100% interest and spent over $17 million that year. The forecasted budget for 2007 work was $18.4 million with a program that included diamond drilling and soil and rock geochemistry (20,269 samples for gold and multi-elements) with a sampling focus on the bedrock/soil interface over the entire Back River claims. Further work included metallurgical test work with results being gravity recovery with overall high gold recovery with simple crushing and flotation. Scoping studies, update determinations of resources and mining studies, and environmental baseline surveys (water quality, hydrology, fisheries and wildlife surveys) are also ongoing.

A total of 75 new mineral claims (82,960 ha) named the Wishbone property was staked on both Crown land and IOL. These claims are located 50 km west of the Goose Lake project on the Hackett River Group volcanic trend and are considered favourable for gold, copper, silver and zinc mineralization. Work in 2007 on this property involved reconnaissance level prospecting and sampling.

HOOD RIVER

Operator
Golden River Resources
Commodity
Gold
NTS
76L/13
Location
165 km southeast of Kugluktuk

Golden River Resources has an agreement with Tahera Diamond Corporation to explore for gold and base metals on the Tahera ground in the Contwoyto Lake and Hood River area. Several auriferous iron formations are found on these properties. Golden River also has full access to Tahera's extensive geophysical and geochemical databases on this ground. Several areas within the properties returned favourable gold up to 33 g/t from sampling.

HOPE BAY PROJECT (DORIS NORTH, MADRID, BOSTON)

Operator
Miramar Mining Corporation
Commodity
Gold
NTS
76O/09, 76O/10, 76O/15, 76O/16, 77A/02, 77A/03, 77A/06, 77A/07, 77A/10
Location
130 km southwest of Cambridge Bay

The Hope Bay Gold Project covers most of the entire Hope Bay greenstone belt and includes over 1,000 km^2 of one of the most prospective undeveloped greenstone belts in Canada. The project consists of mineral claims, mineral leases and IOL EAs with a combined total area of approximately 110,151 ha. The Hope Bay belt, 80 km long in a north-south direction and seven to 20 km wide, is in the northeast portion of the Slave Structural Province. The belt and its deposits are classified as typical Achaean lode-gold-type, comparable to the prolific Abitibi Belt of central Canada. These belts are typically isoclinally folded, contain belt-parallel shear zones and the deposits are characteristically associated with large-scale regional structures.

Lakeshore vein at Doris North. COURTESY GN EDT

Significant gold deposits defined on this property include Doris North, Madrid and Boston. All deposits and showings occur within or in proximity to a major structure or structural zone. The current total resource (indicated/inferred is estimated at 10.7 million oz Au, with 3.0 million oz from the high-grade Doris and Boston deposits (4.0-8.0 g/t cut-offs), and 7.7 million oz from the low-grade Madrid resource (1.5 g/t cut-off).

The Hope Bay project is 100% controlled by Miramar Mining Corporation. However, after making an initial investment in 2005 in Miramar, Newmont Mining Corporation (Newmont) and Newmont Mining B.C. Limited, a wholly owned subsidiary of Newmont, entered into an agreement with Miramar that provides for the all-cash $1.5 billion offer of acquisition by Newmont of all the outstanding common shares of Miramar. This deal is expected to be finalized by year-end 2007.

The belt was again the focus of one of the largest exploration projects in Nunavut in 2007 with Miramar Mining Corporation reporting mid-year spending of over $39.6 million including $8.2 million for future development (Phase 2) engineering and environmental studies.

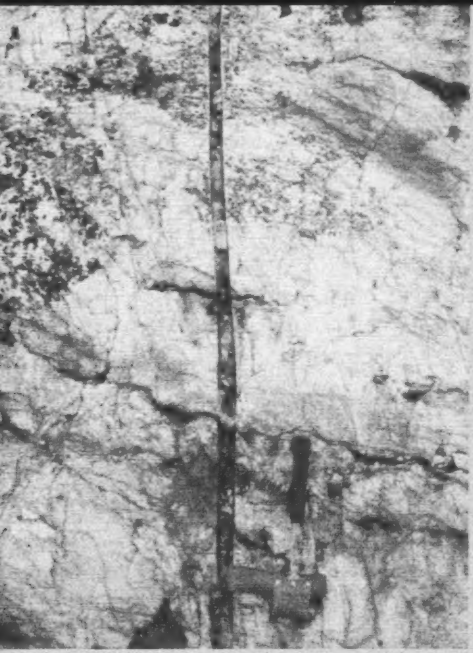
Objectives for the 2007 program included:

i) advancing a feasibility study for development options for the Hope Bay belt beyond the planned Doris North mine, including infill and expansion drilling and supporting technical and metallurgical studies for the Madrid and Boston geologic systems;
ii) conducting exploration drilling proximal to the existing deposits; and
iii) testing of priority exploration targets for new discoveries in settings similar to the existing resource areas.

The Doris deposits (Doris North, Doris Central, Doris Connector) occur at an inferred inflexion in the Hope Bay structural break. Gold occurs within a steeply-dipping quartz vein system in folded and metamorphosed pillow basalts. At the north end of the system (Doris North), the veins are folded into a doubly plunging anticline with the high-grade hinge zone lying close to the surface. Measured and indicated resources are 1.169 million tonnes at 19.3 g/t Au (726,000 contained ounces) and inferred resources are 1.634 million tonnes at 14.5 g/t. (for 766,000 contained ounces). The Doris North project is currently in the final stages of the permitting process with a mine scheduled to open mid-2008 with a two-year mine-life. Permitting advanced with a positive water license decision announced in September by the Nunavut Water Board and subsequent issuing of the water license by the Minister of Indian and Northern Affairs Canada in October 2007. Site preparation for the Doris Mine continued in 2007 with the acquisition and mobilization of construction materials, equipment and plant facilities.

The Madrid deposit area hosts the Rand, Naartok (Naartok East, Naartok West) and Suluk showings. The Madrid Trend corridor hosts the Rand Spur, Marianas, Patch 7 and Patch 14 zones. Gold mineralization is structurally controlled by a complex, large-scale zone traced for 11 km of intense strain and alteration termed the Deformation Zone. Most resources lie within the northern 2 km of this zone.

The Boston deposit, one of the largest known gold resources in the belt, is located near the south end of the belt and associated with a flexure in the Hope Bay structural break. Four zones of mineralization are known at Boston (B2, B3, B4) with the BN



Channel sample across Lakeshore vein at Doris North.
COURTESY GN EDT

zone discovered in 2006 and a style of mineralization not previously recognized at Boston. Work was undertaken in 2007 to remodel the Boston resource utilizing a 1.5 – 2 gram cut-off grade instead of the existing 5 gram model used to evaluate Boston's potential as an open pit. The current Boston resource is 2,312,000 tonnes of 10.7 g/t Au indicated and 2,431,000 tonnes of 9.5 g/t Au inferred.

Close to 59,000 m (210 holes) was completed by mid-fall at Hope Bay.

Significant results include the expansion of the Suluk and Rand deposits of the Madrid system with some of the better results being intersections of 7.0 g/t gold over 48 m from Suluk and 8.4 g/t over 54 m from Rand. 2007 drilling returned significant intersections; two of the more notable drill holes were at Naartok East intersecting 5.1 g/t Au over 34.0 m and at Rand intersecting 4.1 g/t Au over 32.6 m.

Other highlights from the 2007 program was the expansion of the Boston BN deposit demonstrating its possible link with the existing Boston deposit, and the completion of a significant regional exploration program testing the highly prospective geology of the Madrid trend.

Assay results from regional exploration highlighted a new gold discovery (the Kanosak Prospect) and returned significant values of 33 g/t, 24 g/t, 12 g/t and 9 g/t Au from an area of strained and silicified granitoid containing up to 10% disseminated pyrite and quartz veining. This discovery, located approximately 20 km north of the Boston deposit, has not been drilled.

HOPE BAY PROJECT (ORO)

Operator
North Arrow Minerals Inc.

Commodity
Gold

NTS
77A/03

Location
125 km southwest of Cambridge Bay

North Arrow Minerals Inc. acquired the Hope Bay Project (Oro property), from Strongbow Exploration Inc. in May 2007. This area has been explored since the mid-1960s. The five ORO mineral claims (4121 ha) were staked in 1997 and 1998 and lie three kilometres north and along strike of Miramar's Doris gold deposit. Historical mapping, geophysics and diamond drilling has identified prospective horizons with similar stratigraphy and structure to that which hosts the Doris deposit. North Arrow is evaluating plans for the 2008 season.

LACH

Operator
Kaminak Gold Corporation

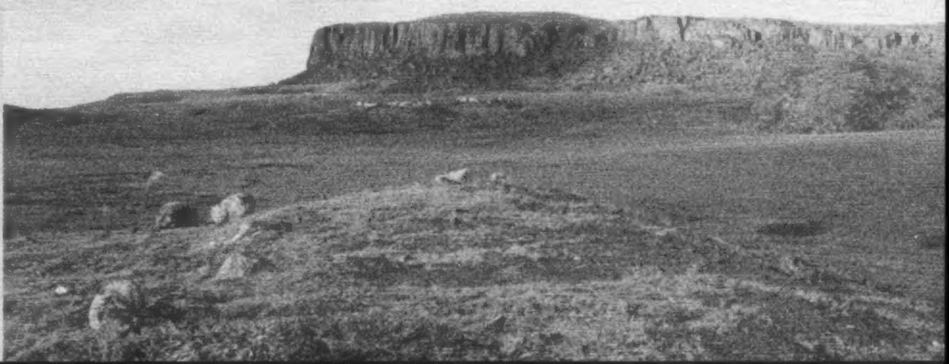
Commodities
Gold, Copper, Bismuth

NTS
76N/06

Location
100 km northwest of Bathurst Inlet

Kaminak Gold Corporation owns 100% of three prospecting permits totalling 44,000 ha deemed prospective for hosting fault-related gold mineralization. The property hosts over 30 individual untested gold occurrences with assays of at least 10.0 g/t Au. It straddles the Bathurst Fault Zone, a major zone that separates Archean greenstone rocks from younger Proterozoic sedimentary rocks and is traceable for over 500 km. Gold occurrences (Patton Lake, Gela Lake, Startling Lake, Arnaud Lake) are spatially related to the fault zone and hosted in brecciated quartz and iron-carbonate rich veins which also carry arsenopyrite, galena, chalcopyrite, pyrite, sphalerite and bornite. Visible gold has been noted in quartz veins from each of these occurrences. At Gela Lake, anomalous gold-copper-bismuth mineralization has also been reported. Detailed work plans for 2007 were not available.

Area of Windy Camp, Hope Bay Project.
COURTESY GN EDT



LUPIN, ULU

Operator
Zinifex Canada Inc.

Commodity
Gold

NTS
76E/11, 76E/14

Location
300 km south of Kugluktuk

The former Lupin gold mine was acquired by Zinifex Canada Inc. as part of their acquisition of Wolfden Resources Inc. The Nunavut Gold Project consists of the Lupin gold mine and the Ulu development gold project.

Gold in iron formation was discovered in 1961. Kinross Gold Corporation acquired the Lupin underground gold mine from Echo Bay Mines in 2003 and operated it until closure in 2005. The rocks were repeatedly deformed and mine site stratigraphy consisted of two steeply-plunging, steeply-dipping anticlines separated by a syncline. At the time of mine closure, Lupin had produced over 3.37 million oz of gold at an average grade of 9.3 g/t Au. Wolfden Resources became the owner of Lupin in 2006 and in 2007, the ownership changed again with the takeover of Wolfden by Zinifex.

At closure in early 2005, Kinross calculated a remaining resource of 770,000 tonnes at 9 g/t gold. In December 2006 the remaining resource was estimated to be 1.1 million tonnes at 11.3 g/t gold. Zinfiex considers both these resources as unofficial.

The Ulu satellite deposit, located 160 km north of Lupin, is part of Zinifex's Nunavut Gold Project. This gold deposit, discovered by BHP in 1989, contains gold resource in a number of quartz-veined shear zones and has the potential to supply additional reserves to feed the Lupin mill. Work to date has delineated a resource of approximately 1.1 million tonnes at 11 g/t gold. Zinifex has initiated a study to evaluate strategic options for the Nunavut Gold Project and its gold assets.

NEEDLE GOLD

Operator, Partner
Kaminak Gold Corporation,
TerraX Resource Corporation

Commodity
Gold

NTS
76G/03

Location
200 km south of Bathurst Inlet

Kaminak Gold Corporation owns 100% of the Needle Gold Property which consists of two claims (2066 ha) that are host to numerous high-grade surface gold showings

Tailings pond No. 2 at Lupin mine site.
PHOTO BY INAC

Folded iron formation on Needle Lake property.
COURTESY TerraX

hosted by banded iron formation similar in geology to the past-producing Lupin gold mine. The property contains more than a dozen, historical, untested gold occurrences with greater than 10 g/t Au. Several grab samples assayed up to 23.59 g /t Au across 2.11 m and 13 holes (1,287 m) drilled in the past included intersections of 9.46 g/t Au over 3.43 m of core length and 11.58 g/t Au over 2.02 m. Prospecting on the property in 2005 uncovered a locally derived boulder that returned an assay of 17.28 g/t Au. In 2006, a 530 line-km airborne magnetic/electromagnetic survey was flown and determined the geophysical properties of the known zones and mapped the extent of banded iron formation. In 2007, the property was optioned to TerraX Resource Corporation who, under the terms of the option agreement, has the right to initially earn 51% by spending $1 million in exploration expenditures and staged share payments totalling 400,000 shares to Kaminak by December 31, 2010. Further spending of $1 million will earn TerraX the right to increase its project interest to 60%. 2007 exploration expenditures were set at a minimum of $100,000 and work involved geological mapping, prospecting and ground inspection of known gold occurrences.

REGAN LAKE

Operator
North Arrow Minerals Inc.

Commodity
Gold

NTS
76G/04

Location
190 km south of Bathurst Inlet

North Arrow Minerals Inc. acquired the Regan Lake gold property from Strongbow Exploration Inc. in May 2007. This property consists of 9,860 ha on IOL in the Back River area and hosts over 19 km of iron formation within the same sedimentary rocks as those at George and Goose lakes gold deposits. Past exploration has focussed on two occurrences of folded sulphidic iron formation in the southeastern part of the property. Mapping and rock and till sampling produced a revised structural interpretation for the area. Geochemical surveys confirmed gold in iron formation horizons within the property with 48 of 205 rock grab samples returning greater that 1 g/t Au with three highest values of 25.8 g/t Au, 29.5 g/t Au, and 26.2 g/t Au. North Arrow considers the property to be drill-ready and is evaluating plans for the 2008 season.

TURNER LAKE GOLD PROPERTY

Operator, Partner
Tradewinds Ventures Inc.,
Rockgate Capital Corp.

Commodities
Gold, Copper, Nickel, PGE

NTS
76N/02

Location
60 km northwest of Bathurst Inlet

The Turner Lake Property consists of four claims close to Bathurst Inlet and covering 29 km^2 with three mineral occurrences: Main Gold Showing, Turner East Gold, and Nickel Knob Showing (copper, nickel, gold, platinum, palladium). The mineral assemblage of the Turner Lake Property is similar to that of the former Lupin gold mine located 200 km to the southeast. Previous work included extensive mapping, airborne and ground geophysics, drilling and trenching which exposed at least three high-grade shoots of gold mineralization. Historic sampling numbers are 4.5 g/t over 3.2 m (true channel width), 28 g/t Au over 4.75 m, 12.86 g/t Au over 8.87 m, 4.08 g/t Au over 15.27 m, 15 g/t Au over 4 m and 10 g/t Au over 5 m. The Nickel Knob Showing is a nickel-copper-PGE showing in ultramafic intrusive rocks. In November 2007, Rockgate Capital Corp. announced a binding letter of intent for Tradewinds to earn up to a 75% interest. Rockgate is planning an extensive diamond drill program (up to 20,000 m) in 2008 targeting the Main Gold Showing with drill holes into other mineralization.

(Below) Fuel drum from Rockgate's field program.
PHOTO BY L. HAM

Nickel – Copper – Platinum Group Elements (PGE)

MIE

Operator
Adriana Resources Inc.

Commodities
Nickel, Copper, Cobalt, Platinum, Palladium, Gold

NTS
86J/11, 86J/14, 86O/03

Location
90 km south of Kugluktuk

Adriana Resources Inc. added to their land holdings on the Mackenzie Igneous Event (MIE) project over the Muskox Intrusion. The MIE project covers more than 630 km² and is comprised of two properties, All Night Lake and McGregor Lake. The Muskox Intrusion is a layered mafic intrusion associated with the Coppermine Volcanics and the Mackenzie Dyke Swarm, which together comprise the Mackenzie Igneous Event. The Mackenzie Igneous Event deposited an estimated 5 to 10 million cubic metres of magma across Northern Canada. Similar events worldwide host large, rich, nickel-copper-PGE deposits. One of the world's largest similar complexes, Noril'sk-Talnakh in Russia, hosts numerous deposits and operating mines.

The potential of the Muskox Intrusion was first recognized in the 1950s by Inco Limited exploring for native copper in the Coppermine area. Since then, various companies have spent more than $20 million on exploration. High-grade copper, nickel and PGEs occurrences were historically sampled along the walls of the Intrusion but targets have not been drilled.

The McGregor Lake Property is centred over part of the intrusion where highly anomalous Ni-Cu-PGE mineralization occurs in the walls. Additionally, the southern part of the property is situated over a major northwest-trending structural corridor which intersects the base of the intrusion. Adriana considers the base to represent a corridor for massive sulphide accumulations of copper, nickel, platinum and palladium, similar to the Noril'sk deposit.

The All Night Lake Property covers the layered series and roof zone of the intrusion and is being explored for chromitite-PGE reef-style mineralization, similar to the reefs of the South African Bushveld complex. This zone has not been explored thoroughly in the past, partly because of poor outcrop exposure.

Based on the results from the 2005-2006 exploration programs, Adriana focussed the 2007 program on its All Night Lake Property and three target areas, All Night Lake, Pointer Lake, and Tabb Lake. Two drill holes (600-800 m in length) were drilled down-dip from an earlier hole also drilled in 2007 to test the extent of mineralized Ni-Cu-PGE intersections. The earlier hole intersected a 14 m zone of disseminated magmatic sulphide mineralization in the top half of a 65 m thick magmatic unit. The zone, 30 m above the footwall contact with the country rocks, included a six m interval with an average weighted grade of 0.47% Ni, 1.12% Cu, 1.46 g/t Pd, 0.13 g/t Pt and 0.13 g/ Au. These results are interpreted as significant in that a new zone of mineralization has now been identified near the Keel portion within the Muskox Intrusion.

Gossan developed in Archean metavolcanic rocks, eastern Kitikmeot.
COURTESY CNGO

Locally derived frost heave boulder in area of Muskox Intrusion.
PHOTO BY L HAM

+ MUSKOX INTRUSION PROJECT

Operator, Partner
Silvermet Inc.,
Prize Mining Corporation

Commodities
Nickel, Copper, Cobalt, Platinum, Palladium, Gold

NTS
86J/11, 86J/14, 86O/03

Location
90 km south of Kugluktuk

Silvermet Inc. optioned land from Prize Mining Corporation between 1994 and 2001 over the Muskox Intrusion. Silvermet's agreement with Prize Mining permits it to earn a 70% interest in the claims by incurring not less than $10 million expenditure by December 7, 2010, of which $4 million must be spent by June 30, 2008. To date, Silvermet has spent approximately $1.1 million.

In 2006, Silvermet conducted an intensive geochemical soil-sampling program over their property. Integration of this data with historical data was carried out during the winter of 2006-2007. One of the key recommendations from this work was the formulation of a 10,000 m drill program for 2007 over newly discovered exploration targets.

Drilling (4130 m in 26 holes) was conducted at the Pyrrhotite Lake and Valley Lake areas in the southern part of the Muskox Intrusion. Both of these areas show coincident anomalous Ni-Cu soil geochemistry and have significant historic drill intersections. Pyrrhotite Lake had two historic holes which graded 7.5% to 10.6% copper and 3.2% to 4.7% nickel. In 2007, four holes intersected five to nine metres of fine- to coarse-grained disseminated sulphides. A deeper drill hole intersected 16 m of disseminated sulphide mineralization. The Valley Lake area has a prominent geochemical soil anomaly which is constrained by spectacular gossans that strike continuously along the intrusion western and eastern margins. A hole drilled near the western margin of the intrusion intersected 17 semi-massive and massive sulphide intervals ranging in width from 0.18 to 1.45 m at depths of 42.61 to 63.09 m. This mineralization is similar in nature to the high-grade Pyrrhotite Lake-type mineralization. Three holes completed along the eastern margin of the intrusion intersected 0.5 and 3.95 m of disseminated to massive sulphide mineralization. Further drilling of the planned 10,000 m program will commence prior to spring break-up in 2008.

The 2007 program suggests that the Valley Lake area is potentially more prospective than Pyrrhotite Lake, with the latter area being the more explored area in the past. Drilling results are being integrated with 2007 detailed ground magnetic surveys conducted on grids with 25 m line spacing. Further geophysical work (gravity and EM) will also be used in 2008, as well as further sampling for mineralogical and metallurgical testing.

Precious Metals

HACKETT RIVER

Operator
Sabina Silver Corporation

Commodities
Silver, Zinc, Gold, Copper, Lead

NTS
76F/15, 76F/16

Location
104 km south-southwest of Bathurst Inlet

Typical sulphide mineralization at Hackett River.
PHOTO BY L. HAM

The Hackett River 2.68 Ga silver-zinc property is considered to be one of the largest undeveloped massive sulphide deposits in Canada. The property hosts at least eight known massive sulphide occurrences; of these the most significant silver-zinc rich deposits are the East Cleaver Lake, Boot Lake and Main Zone (also called "A" Zone) which includes Main Zone West, Main Zone East, and Main Zone Keel. Other significant occurrences include Knob Hill Zone, Downie, Finger Lake and Jo Zone with Patricia Lake Zone as a regional exploration target. The deposits are all covered by Inuit Owned Surface Lands and nine mining leases with an aggregate area of 12,250 ha.

All deposits and showings are located at approximately the same stratigraphic interval and occur over a 6 km-long strike length. The East Cleaver, Boot Lake and Main Zone deposits are hosted within a Mineral Horizon Member felsic tuff, characterized by the presence of marble and/or calc-silicate, chert and variable quantities of sulphides. Mineralization in each of the three massive sulphide deposits consists primarily of coarse grained pyrite, pyrrhotite, sphalerite, chalcopyrite, galena and rare tetrahedrite, freibergite and trace arsenopyrite. Locally, mineral zoning is well developed, both laterally and vertically. The Boot Lake, Finger Lake, Main Zone and Jo Zone deposits and showings are hosted within a southward dipping stratigraphic sequence. The Knob Hill Zone and East Cleaver deposits are found within an overturned anticline that plunges steeply to the west. In March 2007, Wardrop Engineering Inc. released a Preliminary Economic Assessment (NI 43-101 compliant minable mineral resources). This assessment for the Hackett River deposit estimates an annual production of 324.7 million pounds zinc, 12.4 million ounces silver, 20.7 million pounds copper, 37.0 million pounds lead, and 17.2 thousand ounces gold, over a mine life of 13.6 years.

Drilling to date on Hackett River by Sabina is approximately 59,000 m (223 holes); all drilling on the property including that from previous programs totals 81,000 m (365 holes). A budget of $15.0 million was forecast for 2007 and included exploration and infill drilling with a total of 17,590 m (65 holes). The majority of this drilling concentrated on the Main and Boot Lake deposits, upgrading inferred mineral resources to indicated status. Sabina continued to have significant results from their 2007 drill program. The exploration highlight of the year was a significant upgrade to the previously known Jo Zone deposit, located immediately to the southeast of the Main Zone.

Other highlights of the 2007 program included 57.2 m of 16.78% zinc and 140 g/tonne silver from surface in the Main Zone West area in the area designated as the "starter pit" by the Wardrop's Economic Assessment. Another significant intersection in the Boot Lake Deep deposit area included 30.25 m of 10.1% zinc and 317 g/tonne silver in a stepout hole that confirmed mineralization continuity to below 620 m. Mineralization is still open at depth in the Boot Lake area.

Other work included metallurgical testing and optimization, geophysical surveys and the initiation of formal environmental impact assessment processes.

SILVERTIP

Operator, Partner
North Arrow Minerals Inc.,
Strongbow Exploration Inc.

Commodities
Gold, Silver, Lead, Zinc

NTS
76B/13, 76C/16

Location
120 km southwest of George Lake

The Silvertip project includes six mineral claims (6,198 ha) including the Minou and Silverhart silver, gold and base metal showings as well as over 15 km of prospective volcanic stratigraphy along the western flank of the Back River Intrusive Complex. In 2007, Strongbow Exploration Inc. transferred the property to North Arrow Minerals Inc. with a 60% option in which North Arrow will earn their interest by spending $5 million prior to December 31, 2011. Strongbow maintains the right to earn a 100% interest in a seventh mineral claim (1,033 ha) that covers the Pale gold-silver showing.

Mineralization at the Pale showing consists of quartz veining and locally significant sulphide mineralization hosted within a structurally complex, thick north-westerly-striking sequence of variably silicified and carbonate altered felsic volcanic rocks. Surface sampling in 2006 confirmed mineralization with 11 of 19 grab samples returning high grade precious and base metal values ranging from 1.98 to 15.7 g/t Au, 380 to 6,162 g/t Ag, 0.55 to 5.5% Pb and 1.18 to 18.0% Zn.

The Minou showings, located approximately 2.5 km southeast of the Pale showing, are in altered felsic pyroclastic rocks. Previous mapping and sampling by Cominco returned values up to 17.8 g/t Au, 76 g/t Ag, 3.1% Pb and 24.7% Zn.

The Silverhart showing, located 16 km northeast of the Pale showing, consists of disseminated sulphide mineralization at or near the contact between felsic and intermediate volcanic flows. Historical trenching returned 970 g/t Ag and 0.48% Zn over 9.1 m, and a single drill hole completed in 1984 encountered 114.8 g/t Ag over 10.7 m, including 712 g/t over 1.5 m.

$500,000 was budgeted for 2007 with work that included 39.4 km of total field magnetics, 4.0 km of HLEM, 15.05 km of induced polarization surveys, collection of 76 samples, prospecting and mapping. Based on geophysical responses and results from exploratory prospecting and sampling, further drilling is planned for the Pale showing for early 2008.

▪ YAVA

Operator
Savant Explorations Ltd.

Commodities
Copper, Lead, Zinc, Silver, Gold

NTS
76G/12, 76F/16, 76F/19

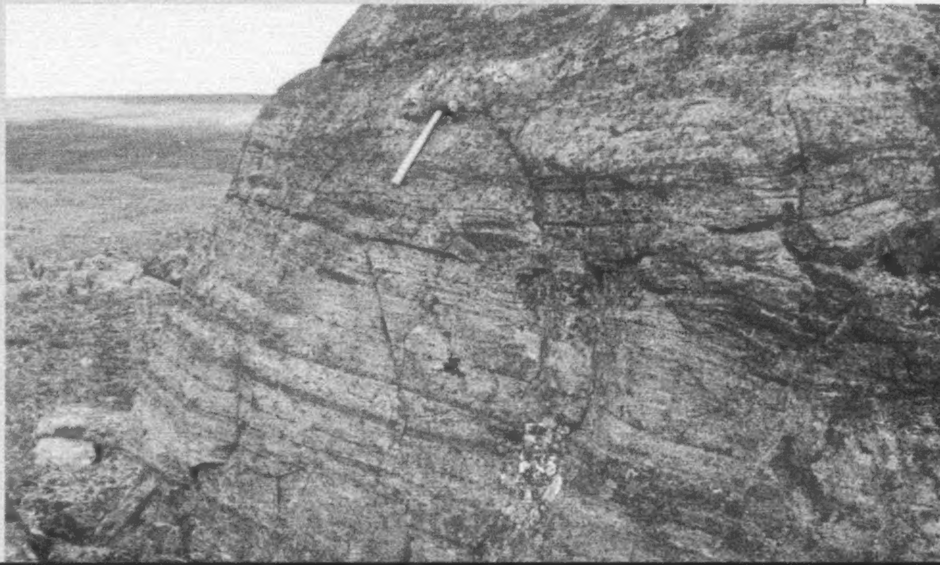
Location
130 km southeast of Bathurst Inlet

The Yava base metals (with minor precious metals) property consists of one mining lease covering 1,304.25 ha and 16 claims covering 4,449.33 ha. The Yava Property extends approximately 25 km along strike of the Hackett-Back River greenstone belt. Mineralization on the property has been investigated since the early 1970s and exploration carried out on the property until 1975. In 2004, Expatriate Resources Ltd., predecessor to Pacifica Resources Ltd., conducted geophysical and geological surveys. These land holdings were then held by Pacifica until 2007 when Pacifica transferred the Yava Property, subject to 10% carried interest by the estate of S.M. Roscoe, to a new company, Savant Explorations Ltd. At the same time, Pacifica began trading under the new name of Selwyn Resources Ltd.

There are four mineralized Zones at Yava: Yava Main Zone, Yava North Zone, Yava Caribou Lake Zone, and Yava South Zone. Only Yava Main Zone has been drilled in the past and an inferred reserve was suggested in 1976 of 1.3 million tonnes of 1.03 % Cu, 1.60% Pb, 4.98% Zn, 3.42 oz/t Ag and 0.008 oz/t Au. This reserve, however, must be considered unofficial as it is not compliant with the Canada National Instrument 43-101 Standards on Mineral Resources and Reserves, the standards for disclosure for mineral projects.

In 2007, Savant Explorations Ltd. conducted work on Yava which included a $216,100 program of airborne geophysics (EM, magnetic surveys) followed by geological mapping of the identified conductors. Results are pending.

Layered ultramafic intrusion in the eastern Kitikmeot. COURTESY CNGO



Kivalliq Region

The Kivalliq District includes the eastern mainland, Southampton Island and several smaller islands in Hudson Bay. The communities of Rankin Inlet and Baker Lake are the main staging points for exploration projects. Scheduled and charter air services, expediting companies, and other support businesses are available in these centres.

Past producing mines in the Kivalliq are the North Rankin Nickel Mine at Rankin Inlet and the Cullaton/Shear Lake gold mine north of Nueltin Lake.

2007 saw a dramatic increase in the number of grassroots properties within the district and the renewal of interest in properties with known mineral occurrences. Established gold, diamond and nickel exploration projects in the Kivalliq were augmented in 2007 by an influx of uranium exploration. Of the 53 exploration properties in the region, 26 are under evaluation for their uranium potential, with two more having uranium–base metals associations. The majority of the uranium exploration interest is directed towards the Proterozoic Thelon Basin and underlying Archean basement rocks.

Early in 2007, Agnico-Eagle Mines Ltd. announced it had entered into an agreement with Cumberland Resources Ltd. by which it would make an all share exchange offer for all outstanding and fully diluted common shares of Cumberland. The exchange was completed on July 9, 2007, placing a value of $710 million on Cumberland based on all outstanding shares and the share closing price on the date of offer.

Agnico-Eagle continued exploration in the immediate area of the known gold deposits of the Meadowbank project. New drilling revealed ore-grade intercepts over minable widths outside of the currently known reserve and resource envelope for the Meadowbank deposits. In addition, Meadowbank continues advancing through the regulatory process to secure a water license for mining operations. Technical meetings and public hearings related to the water license application are expected in 2008. Gold production is expected to begin in 2010.

Cameco Corporation, the world's largest uranium producer, who in 2006 acquired an interest in UNOR, acquired a 10% equity interest in Western Uranium Corporation (WUC), forming a strategic alliance covering all WUC properties, including those in Nunavut.

Diamond exploration efforts continued to produce encouraging results: three new kimberlite pipes were discovered on the Nanuq property, and 31 new kimberlite occurrences discovered on the Churchill Property. Additional highlights are the recovery of a 5.43 carat diamond during the bulk-sampling of the Kahuna kimberlite dike. The diamond is a broken fragment of a larger stone estimated based on the recovery of eight complementary broken diamonds in the same sample, to have been up to 14 carats in size. ■

Cross beds in pebbly Thelon sandstone. PHOTO BY C. JEFFERSON

Iron formation exposures within Greyhound claims.
COURTESY INTREPID MINES

GREYHOUND PROPERTY

Operator, Partner
Intrepid Mines Ltd.,
Aura Silver Resources Inc.

Commodities
Copper, Lead, Zinc, Silver

NTS
66A/08

Location
50 km north of Baker Lake

The Greyhound Property is a high grade silver and base metal prospect located in the central Churchill region of Nunavut. The prospective area contains a mineralized horizon within an Archean greenstone belt where samples of bedded sulphide-mineralized boulders have returned assays of 0.48% Pb, 0.1% Zn, 0.33% Cu, 1,632 g/t Ag (47.6 ounces per ton), and 0.58% Pb, 1.41% Zn, 0.59% Cu, 3,400 g/t Ag. The horizon that hosts these high metal values is poorly exposed as intermittent sub-crop rubble and sparse outcrop along a strike length exceeding 12 km.

Aura Silver initiated its first phase of exploration on the property in 2006, contracting a MEGATEM airborne survey with Fugro Airborne Surveys Ltd. The property is now under option to Intrepid Mines Ltd. A field program of prospecting, sampling, and ground checking of geophysical targets was undertaken in 2007.

KEEWATIN PROJECT

Operator, Partner
Tri Origin Exploration Ltd,
BHP Billiton

Commodities
Copper, Gold, Silver, Lead,
Zinc, Uranium

NTS
65A/05, 65A/06, 65A/11, 65A/12

Location
120 km southwest of Arviat

The Keewatin Project lies in a Proterozoic sedimentary basin, surrounded by Archean rocks. The basin consists of siliciclastic rocks of the Upper and Lower Hurwitz Group, with iron formation rimming much of the basin.

The 2007 program consisted of six diamond drill holes totalling 563 m to test airborne and ground electromagnetic geophysical targets within four widely-spaced areas.

Hole EL07-02 contained seven samples representing 6.9 m of core, between depths of 21.5 and 167.4 m down-hole which returned anomalous values for copper, ranging up to 341 ppm (0.034%). The same hole returned anomalous values of uranium in five samples representing 5.5 m of core with values ranging up to 134 ppm (0.35 lbs U_3O_8 per tonne). Previous work in the area by Tri Origin has identified a significant new uranium target area defined by grab samples of boulders, located near the site of hole EL07-02, which returned assays of 8,500 ppm and 3,380 ppm uranium (22.1 and 8.8 lbs U_3O_8 per tonne, respectively). Hole EL07-03 intersected weakly anomalous gold mineralization with a maximum assay value of 741 ppb across one metre. This hole was located near the interpreted source of a boulder field which returned values of up to 18.7 g/t Au from grab samples taken during the company's previous work programs.

These results confirm that bedrock on the property is copper, gold and uranium-bearing. This is the first time that drilling has been conducted at these targets. Prior to this work, occurrences of copper, gold and uranium had been identified by the company but only sampled in unsourced boulders not directly tied to the extensive airborne and ground geophysical targets defined by Tri Origin. The company is looking to move ahead with detailed exploration in these areas.

Based on the positive 2006 and 2007 field results, Tri Origin staked an additional four claims totalling 4,046 ha. The initial Keewatin property consisted of five separate claim blocks comprising a total area of 9,824 ha in which Tri Origin was earning a majority interest from BHP Billiton Diamonds Inc. The new claim acquisition brings the total land package to about

◆ Diamonds

Bulk sampling from Kahuna kimberlite at Churchill project.

COURTESY SHEAR MINERALS

◊ CHURCHILL[1], CHURCHILL WEST[2]

Operator, Partners

Shear Minerals Ltd.[1,2],
Stornoway Diamond Corporation[1,2],
International Samuel Exploration Corp.[2]

Commodity

Diamonds

NTS

55J, 55N, 55O

Location

70 km north of Rankin Inlet

Since 2003, more than 50 kimberlites have been discovered in this large land package, including four diamondiferous dykes. The 2007 work program focused on the Churchill property, with continued exploration of new promising indicator mineral trains and geophysical anomalies, and the evaluation of four dykes. Results suggest the bodies are significantly diamond-bearing, vertically-emplaced kimberlite dykes (Notch, Jigsaw, Kahuna, KD308). The dykes are up to 4 m in width, variable lengths, and have returned sample grades of up to 2.18 c/t.

Thirty-one new kimberlite discoveries were made on the Churchill property in 2007. Fifteen were intersected in drill core: three of these are interpreted as high diamond potential kimberlite dykes, occurring at the heads of three different G10 pyrope mineral trains in the Sedna Corridor. Prospecting resulted in 16 new kimberlite discoveries occurring as outcrop and sub-crop. A total of 291 kg of kimberlite was collected in 15 to 25 kg grab samples from each new outcrop and sub-crop occurrence. In addition to the outcrops and sub-crops, nine unsourced kimberlite float anomalies were found. All samples are being analyzed to determine diamond potential.

The Kahuna kimberlite is a 2.8 to 4 m wide vertical kimberlite dyke that trends for more than 5.5 km inferred from the geophysical evidence. A 356 t mini-bulk sample was collected from three surface pits at the Kahuna dyke in 2007 to help establish a preliminary grade and provide an assessment of the diamond value. Processing of the sample has been completed with the recovery of 11,088 diamonds greater than 0.85 mm with an overall diamond grade of 0.95 c/t.

The first phase of processing (106.6 dry tonnes from the south pit) recovered 3,239 diamonds greater than 0.85 mm yielding 93.54 carats, with the three largest diamonds weighing 1.39, 1.19 and 0.73 carats. The majority of the diamonds are described as white and colorless with a good population of octahedrons. A 5.43 carat diamond was recovered from the second phase of processing. The diamond is described as a broken fragment of a larger stone estimated (from the recovery of eight complementary broken diamonds in the same sample) to have been up to 14 carats in size.

The Meeka kimberlite was found by prospecting an east-west linear trend located southeast of the Jigsaw kimberlite. An area of green-coloured till was sampled and 19 diamonds were recovered from a 15 kg till sample using caustic fusion. Based on interpretation of the ground geophysical survey, Meeka is an east-west trending dyke 500 m in length, open in both directions. The KD308 kimberlite, interpreted to represent a kimberlite blow on a parallel structure 2.5 km east of Kahuna, was also drilled.

High resolution geophysical surveys were conducted over all high-interest G10 pyrope corridors to assist with target identification and drilling. This consisted of ground geophysics totalling 5,000 line-km at 40 m line spacing and high resolution airborne magnetics surveying using the FUGRO MIDAS system totalling 12,000 line-km at 15 m line spacing to provide seamless data for follow-up.

Priority kimberlite indicator mineral areas were covered by 488 till samples. Fifty-one auger drill holes were completed in the Josephine River Corridor to trace the high-interest pyropes in the glaciofluvial sand deposits: 37 of these holes contained visible kimberlite fragments.

HYDE

Operator
Stornoway Diamond Corporation

Commodity
Diamonds

NTS
55D/14

Location
70 km southwest of Arviat

The Hyde Project consists of eight prospecting permits covering 151,200 ha in south central Nunavut. A geophysical survey was flown in 2005, with several anomalies selected for ground checks and till sampling in 2006. To date no results have been released.

ITZA LAKE PROPERTY

Operator, Partner
Stornoway Diamond Corporation,
Bayswater Uranium Corp.

Commodity
Diamonds

NTS
66G/01, 66H/04

Location
130 km northwest of Baker Lake

This area was identified for its kimberlite potential as a result of a 2006 airborne survey which revealed a number of circular magnetic features within and adjacent to the original claims staked in 2006. The magnetic features are interpreted to represent possible clusters of kimberlite pipes.

In 2007, Bayswater Uranium Corp. entered into an agreement with Stornoway Diamond Corporation to explore the property for diamonds. Ground magnetic surveys and till sampling were completed. Additional claims were staked around the original block, with the entire parcel being covered by detailed airborne magnetic surveys.

NANUQ

Operator
Peregrine Diamonds Ltd.

Commodity
Diamonds

NTS
56G

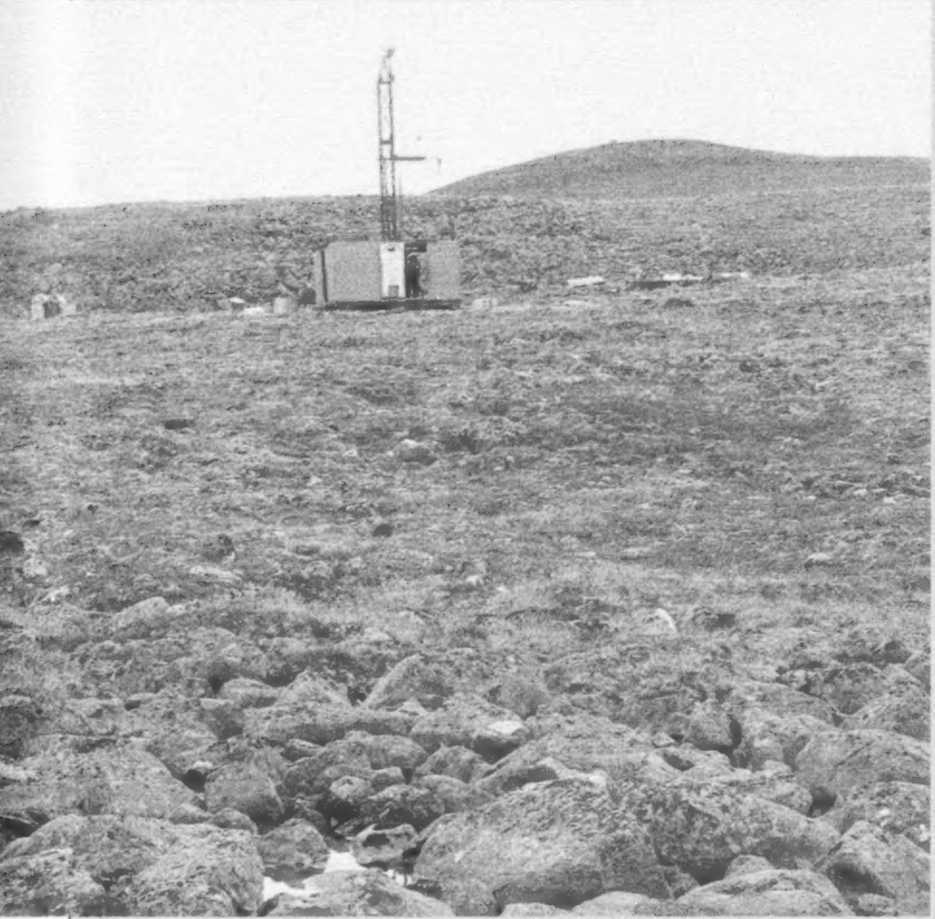
Location
225 km northeast of Baker Lake,
300 km north of Rankin Inlet

The Nanuq property consists of 144 mineral claims covering approximately 146,552 ha. Archean granitic and gneissic units of the western Churchill Province underlie the area. The property sits along a major salient, the Keewatin arch, which is intersected by the Wager Bay shear zone, a prominent crustal break.

Peregrine has been exploring at Nanuq since 2005, taking 1,692 heavy mineral samples and completing more than 14,000 line-km of airborne and ground geophysical surveys. The first drilling campaign at Nanuq occurred in 2007 on three distinct magnetic anomalies, resulting in the discovery of three diamondiferous kimberlite pipes. Twelve core holes totalling 2,500 m, drilled in a combination of angled and vertical orientations, were completed on the three kimberlites with kimberlite intersections ranging from 59 to 248 m. There are 10 additional magnetic anomalies on the property that have yet to be drilled.

A total of approximately 1,632 kg of kimberlite from the three pipes (Naturalik, Kayuu, and Tudlik) were sent for micro-diamond recovery via caustic fusion. In all, a total of 1,013 diamonds (>0.075mm) were recovered from the processing of 1,558 kilograms of kimberlite (705.85kg from Naturalik, 763.50kg from Kayuu, and 88,.95kg from Tudlik) with the largest stone described as a white fragment measuring 2.12 mm X 1.48 mm X 1.0 mm.

Sahara base camp for work on Itza Lake Property.
PHOTO BY K. COSTELLO



Drilling at Nanuq Property.

COURTESY PEREGRINE DIAMONDS

Naturalik is estimated to be over seven hectares in size and is described as a multi-phase pipe-shaped body in-filled by two magmatic kimberlite units and a variably fragmented volcaniclastic kimberlite unit. Kayuu is located approximately five km west of Naturalik and is estimated to be approximately five ha in size with complex internal geology. Kayuu is described as a pipe-shaped body in-filled by six volcaniclastic kimberlite units and one variable volcaniclastic to apparent magmatic kimberlite unit. Tudlik is located approximately 300 m southwest of Kayuu. At less than 1.0 ha in size, it is smaller than Naturalik and Kayuu and was intersected with only a single drill hole. The kimberlite recovered is described as a volcaniclastic unit, generally massive, fine-grained and moderately macrocrystic with a low abundance of mantle indicator minerals and country rock xenoliths.

Peregrine plans to continue its exploration of Nanuq in 2008 using a combination of ground geophysics, followed by core drilling of the most prospective anomalies. The 2008 program will also include PQ diameter (85 mm, outside diameter) core drilling of the three known diamondiferous kimberlites in order to obtain larger samples for macro-diamond analysis.

◊ NANUQ NORTH

Operator, Partners
Peregrine Diamonds Ltd.,
Indicator Minerals Inc.,
Hunter Exploration Group

Commodity
Diamonds

NTS
56H/02, 56H/03

Location
300 km northeast of Baker Lake

Peregrine Diamonds has entered an agreement with Indicator Minerals and Hunter Exploration Group on the Nanuq North property, which consists of 67 claims covering 46,955 ha. Under the terms of the agreement, a joint venture will be formed with Indicator as the operator and Peregrine and Indicator sharing the costs of exploration on a 50:50 basis. Hunter will retain a gross overriding royalty of 2% on any revenues generated from 16 claims, covering 13,864 ha they staked. Plans for upcoming exploration on the Nanuq North Property are being finalized with Indicator Minerals.

◊ PITZ LAKE

Operator
Kennecott Canada Exploration Ltd.

Commodity
Diamonds

NTS
65P/15, 66A/02

Location
40 km south of Baker Lake

Kennecott holds 14 claims in the Pitz lake area. The company submitted the requisite applications and supporting documentation to obtain authorizations for a prospecting, till sampling, and drill program. To date, no drilling has been reported.

ABERDEEN[1], TURQAVIK[2]

Operator, Partner
Cameco Corporation[1], [2],
De Beers Canada Inc.[1]

Commodity
Uranium

NTS
66A, 66B

Location
120 km west-northwest of Baker Lake[1],
85 km northwest of Baker Lake[2]

The properties are situated along the eastern margin of the Paleoproterozic Thelon Basin near the Kiggavik uranium deposit, covering approximately 244,300 ha. The area is underlain by older Paleoproterozoic metasediments, metavolcanics and granitoid rocks (basement rocks) and the younger clastic sediments of the Thelon Group. Alteration and uranium mineralization in the immediate area of the project is largely unknown. A thick "regolith" of several 10's of metres has been mapped by previous workers along the unconformable contact between Thelon sediments and underlying basement rocks.

By the end of the 2007 field season, the Aberdeen and Turqavik properties had been systematically traversed with at least a two-person crew completing geological mapping, prospecting and sampling outcrop and boulders. Also, a significant portion of both properties has semi-regional gravity (500 x 500 m stations) and helicopter supported resistivity (RESOLVE) coverage. Results from the airborne and ground geophysical programs will be integrated with the surface findings to identify targets for follow-up in 2008.

AMER LAKE; HAWK, KAM, JG (SOUTH BAKER PROJECT)

Operator
Uranium North Resources Ltd.

Commodity
Uranium

NTS
66H/07, 66H/09, 66H/10

Location
140 km north-northwest of Baker Lake

Detailed prospecting and mapping of the mineralized zones was carried out on the Amer Lake property, with some work focused along strike and down dip of the Main Zone and Faucon occurrence (central zone). A total of 37 grab samples collected within the central zone returned U_3O_8 values ranging from 0.07% to 3.57% (average of 0.60%). Samples with anomalously high uranium have been collected as far as seven km east of the Main Zone. Elevated contents of lead, and less commonly silver, copper and molybdenum, are associated with uranium values. Studies are on-going to determine the elemental signature of the uranium mineralization.

Helicopter departing for Cameco's Tunuiyak camp.
PHOTO BY K. COSTELLO
HIGHLAND
C-GXHH

A 3,150 line-km fixed-wing magnetic and radiometric geophysical survey was completed over the Amer Lake property. Numerous airborne uranium anomalies, some coincident with magnetic responses (i.e., Split Lake and Horned Lake uranium occurrences) or proximal to uranium-enriched boulders, have been identified within the preliminary airborne data, and targeted for follow-up.

Within the South Baker Project area, 11 prospects were evaluated with 867 rock and 269 soil samples, and a 24,236 line-km fixed-wing magnetic and radiometric geophysical survey was flown.

Additional ground follow-up and drilling is planned for both project areas in 2008.

BAKER BASIN

Operator, Partner
Pacific Ridge Exploration Ltd.,
Kaminak Gold Corporation

Commodity
Uranium

NTS
55M/10 through 55M/15

Location
60 km southeast of Baker Lake

The Baker Basin Uranium Project is over 202,300 ha in size, and is known to host at least eight significant uranium occurrences.

Uranium mineralization at the Lucky-7 Zone is associated with fracturing and clay alteration in the Baker Basin Kazan Sandstone within a northerly-trending structural corridor, intruded by a mafic dyke. Mineralization occurs on both the east and west contacts of the dyke. To date, thicker sections of the dyke appear to be associated with thicker zones of uranium mineralization.

The Lucky-7 Zone, now drilled to a depth of 500 m, has been traced radiometrically over a 500 m strike length. The average intercept of uranium mineralization based on seven holes drilled to date is approximately 7.5 m grading 0.22% U3O8.

At the KZ Zone, located 10 km west of the Lucky-7, assays are pending for two recently completed drill holes. Pacific Ridge's 2006 drilling program at KZ intersected 0.31% U_3O_8 over 11.2 m, 0.40% over 5.2 m and 0.27 % over 5.8 m.

BAKER PROPERTY

Operator, Partners
Uranium World Energy Inc.,
Majescor Resources Inc.,
De Beers Canada Inc.

Commodities
Uranium, Diamonds

NTS
65O, 65P, 66A

Location
50 km to 140 km west of Baker Lake

In October 2005, Majescor signed an option agreement with De Beers to acquire an interest in the diamond and uranium rights associated with 51 permits covering a total surface area of more than 9,000 km^2. Two continuous claim blocks totalling 19 permits were designated for uranium exploration and form the Baker Lake uranium property.

In August 2006, Uranium World Energy (UWE) entered into an option agreement with Majescor whereby UWE was granted the right to acquire Majescor's uranium rights in the Baker Lake property.

MPH Consulting Limited of Toronto has been retained by Majescor to conduct a comprehensive technical review of the historical uranium exploration data for the Baker Lake area and to design a field program. The geological compilation and analysis work has resulted in the identification of high priority areas across the property and the selection of seven target blocks for airborne geophysical survey. The seven blocks were covered as part a broader 9,287 line-km geophysical survey of De Beer's uranium and diamond permits at Baker Lake. The heli-borne survey consisted of magnetics, EM and radiometrics.

BUGS CLAIMS

Operator, Partner
Ur-Energy Inc.,
J.D. Charlton

Commodity
Uranium

NTS
65K/03

Location
400 km west of Arviat

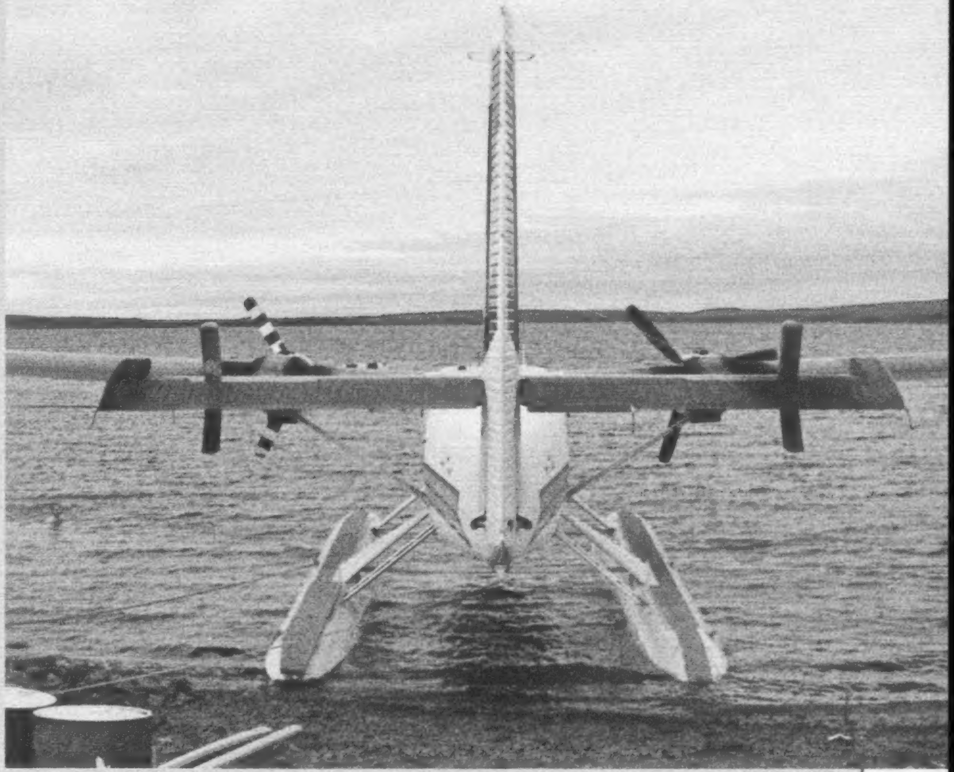
The Bugs Property is predominantly underlain by uranium – and thorium – enriched, ultrapotassic volcanic, sedimentary and intrusive rocks within a pull-apart basin. Past work outlined over 30 uranium bedrock and near-source boulder occurrences featuring three styles of uranium mineralization:

i high-grade uranium in sedimentary and tuffaceous strata,
ii uranium within hydrothermal breccias, and
iii low-grade (but extensive), mineralization hosted by intrusive syenitic bodies (bostonite).

Boulder with alteration zoning from 7-1 zone on Baker Property. COURTESY C.JEFFERSON

Float plane at Bugs beach.

COURTESY UR-ENERGY



A fixed wing aeromagnetic and radiometric survey was flown over the entire property in 2007. New sampling of the uranium-mineralized boulder trains returned assay values as high as 4.7% and 6.0% uranium. Sampling of several bostonite occurrences averaged 250 ppm uranium. Two of the larger bostonite intrusions (Shrike and Gamma) were prospected over strike lengths of 800 m to 1000 m, respectively. Radon surveys were utilized to outline poorly exposed bostonite occurrences over several kilometres in length. They also located an area of extremely high radon flux which is interpreted by Ur-Energy to indicate a concentration of hydrothermal uranium mineralization, referred to as the Lowkey Lake Zone.

Interpretation of airborne magnetic and radiometric surveys resulted in the selection of seven target areas based upon structural offset and dilation features in combination with magnetite depletion. Only one of the seven targets was examined in 2007; the remainder will be prospected and surveyed for their radon signatures in 2008.

GARRY LAKE

Operator
Uravan Minerals Inc.

Commodity
Uranium

NTS
66F/02, 66F/07 through 66F/10, 66F/16, 66G/05, 66G/06, 66G/12

Location
245 km northwest of Baker Lake

The Garry Lake property covers a structurally disrupted basement-sandstone domain that has similarities to major structural corridors in the eastern and central segments in the Athabasca Basin. It covers the interpreted up-ice terminus of a high-grade uraniferous boulder train and several extensive northwest-southeast-trending highly-anomalous surface geochemical 'lineaments' defined by previous operators in the early 1980s. Past work identified the elemental signature of individual mineralized boulders as uranium-lead-selenium-tellirium-silver-copper-arsenic-sulphur. The surface mineralization is hosted in basement metasedimentary rocks belonging to the Lower Proterozoic Amer Group, overlain by coarse-grained clastic rocks of the Thelon Formation.

In 2007 Uravan completed a multi-phased airborne geophysicical survey plus compiled a GIS database of historic geological, structural and surface geochemical data over the property. The interpretation and integration of these multiple data sets has identified a number of uranium anomalies and trends that highlight specific drill taregets for testing in 2008. The work completed included: a 7,325 line-km helicopter-borne high-resolution EM survey at 400 m line spacing and 10,446 line-km of fixed wing high-resolution airborne surveying, consisting of aeromagnetic, horizontal gradiometer and radiometric surveys at 400 m line spacing. The historical geochemical data base consists of approximately 6,800 geochemical sample points, both water and sediment sample data.

The mutli-phased airborne geophysical surveys identified certain basement hosted conductors and structure coincident with a number of surface geochemical trends, radiometric anomalies, basin and basement geology and other alteration features that seem to occur in the overlying Thelon sandstone. These coincident anomalies and trends are considered favourable for sandstone and basement-hosted unconformity-related uranium mineralization.

Uravan plans a multi-phased exploration program for 2008 consisting of further surface geochemical sampling, structure-geological mapping and ground-truthing of specific anomalies and trends, complimented by additional ground geophysics and diamond drilling.

Areva's Kiggavik camp.
PHOTO BY K.COSTELLO

KIGGAVIK NORTH[1], KIGGAVIK SOUTH[1]; TANQUERAY OPTION[2]

Operator, Partner
Forum Uranium Corp. [1,2]
Superior Diamonds Inc.[1,2]
Tanqueray Resources[2]

Commodity
Uranium

NTS
66B/01, 66A/04 through 66A/06, 66A/11, 66A/12

Location
85 km west and northwest of Baker Lake[1]; 40 km west of Baker Lake[2]

Forum Uranium and Superior Diamonds Inc. have a 50:50 joint venture agreement for the Kiggavik North and Kiggavik South properties, and a 50:50 joint venture agreement for the option to earn 60% on the adjacent Tanqueray Option property. The 2007 exploration program consisted of the integration of airborne geophysics and ground geophysics with prospecting, geological mapping and alteration studies over all properties.

Four historic uranium showings (Graphite, LA-4, RD-7, and RD-3) on the Tanqueray Option were examined and three more uranium showings were discovered in areas of favourable geology and structure (Graphite North, Island Lake and SCH). Rock types hosting uranium mineralization are composed almost entirely of interbedded quartzite, metawacke, and schistose units that have undergone structural deformation. Uranium mineralization typically occurs in fractures, breccia zones, and faults. These occurrences will be further evaluated by an airborne apparent resistivity survey planned for the spring of 2008, followed by ground gravity surveys. Depending on the results of these surveys, drilling could be conducted in the summer of 2008.

KIGGAVIK PROJECT (INCLUDES KIGGAVIK[1] SISSONS[2])

Operator, Partner
AREVA Resources Canada Inc.[1,2]
Dae Woo International Corp. [1,2]
JCU Canada
Exploration Company Ltd. [2]

Commodity
Uranium

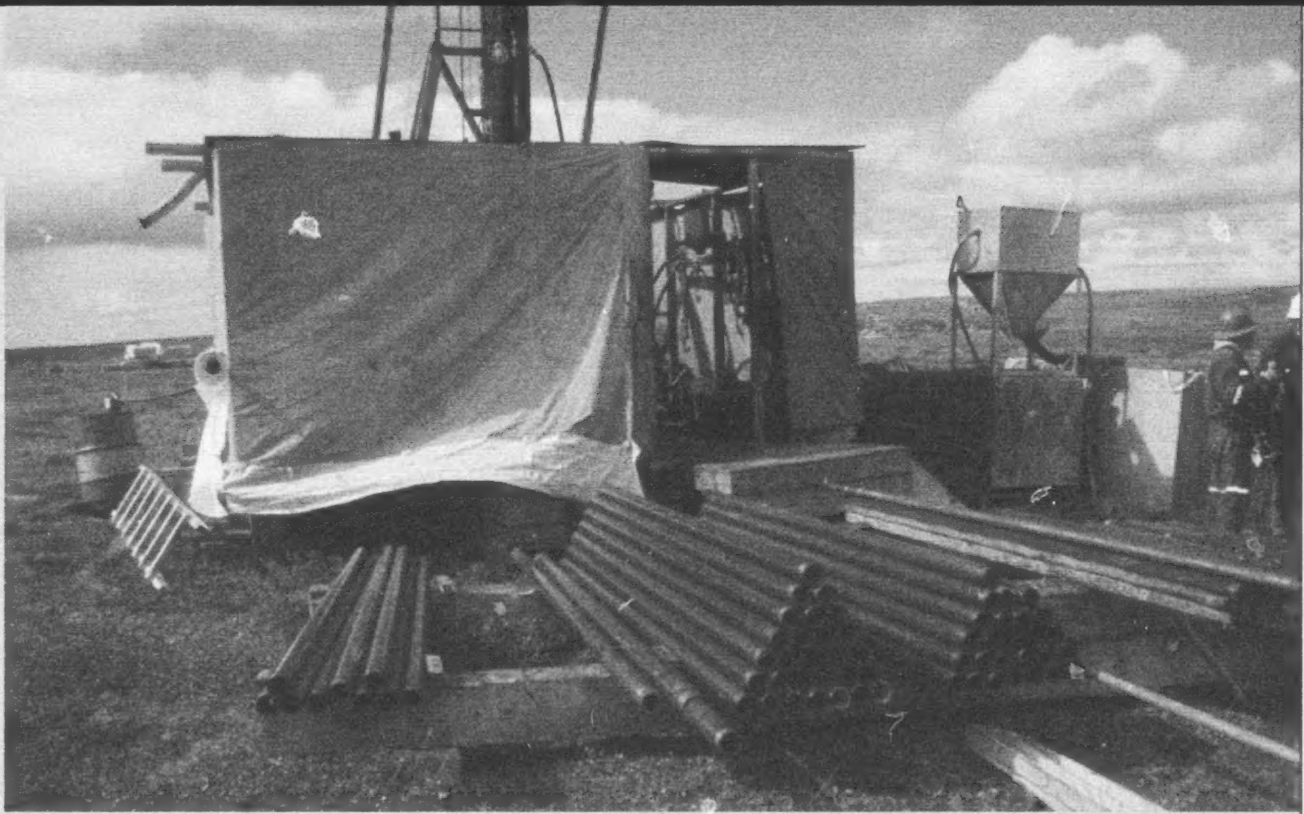
NTS
66A/05

Location
75 km west of Baker Lake

The Kiggavik Project corresponds to mineral leases where potentially economic uranium mineralization has been identified. The Kiggavik Project includes two properties: Kiggavik and Sissons. Ownership of the project is through a joint venture of AREVA, JCU Canada Exploration Company Ltd and Dae Woo International Corp. AREVA Resources Canada Inc. is the operator of the project.

The project encompasses three ore zones in the Kiggavik area (East Zone, Center Zone and Main Zone) and two ore zones in the Sissons area (Andrew Lake and End Grid). The Kiggavik ore zones occur about 2 km south of the faulted contact of the Thelon sandstone with the basement metasedimentary units. The basement host rocks are a sequence of meta-arkoses and meta-pelites, which are overlain by orthoquartzites. Structurally, the area around Kiggavik is situated between two regional fault zones, the Thelon fault to the north and the Sissons fault to the south. The Sissons deposits (Andrew Lake and End Grid), located 15-17 km southwest of Kiggavik, are situated in a belt of Aphebian pelitic and arenitic metasediments which overlie Archean granitic gneisses and granodiorites. The Andrew Lake orebody is known to include some gold and platinum in addition to uranium. The Kiggavik Project has geological resources representing approximately 57,000 tonnes U (148 million lbs U_3O_8), with a grade of approximately 0.24% U_3O_8.

The project had been under care and maintenance from 1997 until 2007 when licenses and permits were granted for the project by INAC, Nunavut Water Board (NWB) and Kivalliq Inuit Association (KivIA) to conduct further exploration activities and environmental baseline studies. As a result of recent trends in the uranium price, AREVA initiated a viability study of this combined project in 2006. The joint venture partners announced in December 2007 their intention to proceed with a two-year feasibility study and to commence the regulatory process to obtain



Drilling MZ07-04 at Kiggavik Main Zone.
PHOTO BY K. COSTELLO

the necessary approvals for a uranium mine and mill complex. In early 2008, AREVA will file a project description commencing the regulatory process for the Kiggavik project. The environmental assessment process will take about four years, followed by several years of construction, before mining could begin as early as 2015.

The 2007 field program included upgrades to the Kiggavik exploration camp, drilling in the area of the Kiggavik and Sissons deposits, and the initiation of environmental baseline studies. Drilling was designed to facilitate waste rock and ore sampling, geotechnical logging, hydraulic testing and permafrost monitoring. Environmental studies focussed on soil, surface water, vegetation sampling, archaeological and caribou surveys throughout the entire project area.

NORTH THELON PERMIT AREA 1 AND PERMIT AREA 2

Operator, Partner
Bayswater Uranium Corporation, Strongbow Exploration Inc.

Commodity
Uranium

NTS
66F/01, 66F/02, 66F/15, 66F/16, 66G/7

Location
175 km northwest and 220 km west-northwest of Baker Lake

The property area covers two blocks of permits (Permit Area 1 and Permit Area 2), totalling 144,868 ha along a northeasterly-trending exposure of basement rocks within the north Thelon Basin. Strongbow and Bayswater are jointly exploring the North Thelon permit areas.

For 2007, Bayswater conducted detailed mapping, prospecting, geochemical and ground geophysical surveys (radiometric and magnetic) to follow up the numerous radiometric anomalies identified by the 2006 airborne surveys.

NUELTIN LAKE

Operator
Cameco Corporation

Commodity
Uranium

NTS
65B/04, 65C/04

Location
325 km west-southwest of Arviat

The Nueltin Lake project consists of 30 claims staked in 2006 and one staked in 1998. In 2006 Cameco completed a high resolution aeromagnetic, radiometric, and gradiometer survey, covering 3,300 line-km over the claims. The geology consists of an Early Proterozoic sequence intruded by granitic plutons. Uranium and gold mineralization has been observed in sulphide-rich (mainly pyrrhotite and pyrite) boulders. A field program of prospecting, sampling, airborne radiometric and Fugro RESOLVE (EM) surveys were carried out.

THELON BASIN

Operator, Partner
Titan Uranium Inc., Mega Uranium Ltd.
Commodity
Uranium
NTS
66B/15, 66G/01, 66G/02, 66G/08, 66H/05
Location
150 km northwest of Baker Lake

Mega Uranium Ltd. and Titan Uranium Inc. entered into an agreement whereby Mega will acquire a 51% interest in all of Titan's current and future claims in the Thelon Basin. To earn the interest, Mega has committed to spend $5 million in exploration work on the Thelon Basin properties on or before December 31, 2008. The 2007 field program was operated by Titan, and Mega will operate the 2008 field program. Upon meeting the expenditure requirements, the companies intend to form a joint venture for the purposes of future exploration.

The 2007 summer program included completion of an airborne magnetic-radiometric survey, claim staking, prospecting, radon surveys and diamond drilling. A total of 61 claims (48,748 km^2) were acquired to cover areas with favourable geology; several radiometric anomalies were identified on the new claims. Prospecting was carried out in numerous areas to further characterize several uraniferous boulder trains that were discovered during previous exploration programs. Prospecting tested areas with favourable geology and radiometric anomalies identified from the airborne survey. In addition, radon surveys were completed in selected areas to better define drill targets. Twenty-three drill holes were completed during the summer drilling campaign for a total of 1,600 m.

REBEL PERMITS, YANKEE PERMIT

Operator
Hinterland Metals Inc.
Commodity
Uranium
NTS
66B/05, 66G/07
Location
170 km west and 170 km northwest of Baker Lake

Hinterland Metals acquired three prospecting permits in February 2007. The company announced intentions to commence evaluation of the permit areas with a fixed wing airborne radiometric and magnetic survey. No further details have been reported to date.

Titan Uranium's Itza Lake base camp for Thelon Basin project.
PHOTO BY K. COSTELLO

RUBY HILL PROPERTY

Operator
Western Uranium Corporation

Commodity
Uranium

NTS
66F/01, 66F/05 through 66F/08, 66G/07

Location
200 km northwest of Baker Lake

Sand Lake base camp for Ruby Hill Project.
PHOTO BY K. COSTELLO

Western Uranium has exploration rights on nine prospecting permits covering 143,670 ha, located along the north and northeast perimeter of the Thelon sandstone basin. The 2007 work program followed up on the September 2006 MEGATEM(C) airborne survey.

Two areas, Area 6 and Area 7, containing conductive geophysical responses were covered by 120 line-km of Transient Electromagnetic (TEM) ground geophysical surveys. In the southeastern corner of Area 6, Quantec Geoscience Ltd. completed 32 lines of moving loop Geonics Protem TEM to evaluate and define a 10 km-long MEGATEM® EM response. The ground survey defined a string of discrete conductive zones 50-200 m wide and up to 1,000 m long over a cumulative strike length of 7.5 km. These conductors are within a complexly faulted portion of a mapped shear zone that juxtaposes Proterozoic Thelon sandstones and Archean igneous rocks along the eastern margin of the Thelon Basin.

Follow-up drilling on Area 7 occurred near the basin margin contact of the Proterozoic Thelon Formation and older Proterozoic Amer Group sedimentary rocks. Core samples of sheared graphite and graphitic, silicified breccias from four holes drilled into a MEGATEM® EM anomaly have returned highly anomalous values for uranium and nickel, as well as other associated base metals. Uranium values up to 443 ppm are accompanied by anomalous base metal values. Other metal assays include: Ni (662 ppm), Cu (694 ppm), Mo (1078 ppm), Pb (215 ppm), Zn (345 ppm) and Co (31 ppm). The geochemically anomalous uranium and pathfinder elements are hosted in discrete 0.5 – 2.5 m zones that occur within sandstones. A fifth hole encountered weak graphitic zones, and exhibits chlorite, illite, and albite alteration.

Drilling in Area 6 failed to encounter any structure, alteration, or mineralization that could explain the source of the EM conductors. The company believes the holes may have been too shallow and needed to be collared farther to the west.

A soil geochemical sampling program utilizing the adsorbed soil, gas, hydrocarbons (SGH) technique was undertaken over portions of Area 6 and Area 7. Approximately 700 samples were collected from the same project area as the ground-based EM survey of Area 6. In conjunction with the geophysics, these samples will assist in defining trends of alteration, mineralization and structure. Another 130 SGH samples were collected on Area 7. Hand samples of Thelon sandstone from Area 6 show abundant quantities of illite. Assay results from both the drill and soil sampling program are pending.

(Top) Chris Clark and Charlie Jefferson examining basal conglomerate of Thelon near Unconformity Lake.

PHOTO BY K. COSTELLO

(Bottom) Field crews departing from Sahara camp.

COURTESY BAYSWATER URANIUM

DANGER
Canadian

ST. TROPEZ CLAIMS

Operator
AREVA Canada Resources Inc.

Commodity
Uranium

NTS
66A/06, 66A/11

Location
70 km west of Baker Lake

AREVA staked the claims in 2005. An airborne geophysical survey is planned for 2008.

SOUTHWEST KIGGAVIK, CENTRAL KIGGAVIK, ITZA LAKE, AMER LAKE EAST AND WEST

Operator
Bayswater Uranium Corporation

Commodity
Uranium

NTS
65O/15, 66B/01 through 66B/03, 66B/08, 66G/01, 66G/02, 66H/05 through 66H/07

Location
135 km west and 140 km northwest of Baker Lake

Bayswater completed a program of mapping, prospecting, geochemical and ground geophysical surveys (radiometric and magnetic) to follow up the numerous radiometric anomalies identified by last year's airborne surveys. An additional 16,000 line-km fixed-wing airborne radiometric and magnetic survey was completed on newly acquired land in the Itza Lake area (approximately 3,215 km^2) for an initial evaluation of the uranium and diamond potential of this region (see Itza Lake Property under Diamonds section). Plans are underway to follow up priority radiometric anomalies from this survey with prospecting, mapping and possibly ground geophysics to identify targets for drilling in 2008.

Intense silicification and chlorite alteration at the BOG prospect. COURTESY OF KAMINAK GOLD CORPORATION

YATHKYED

Operator
Kaminak Gold Corporation
Commodities
Copper, Gold, Uranium (IOGC)
NTS
65J/09 through 65J/11
Location
230 km south of Baker Lake

The Yathkyed property covers 80,940 ha on the west side of Yathkyed Lake. Several significant uranium occurrences, including BOG, YAT and REV, were discovered between 1977 and 1981 on the property.

The BOG trend is intermittently exposed over at least 5,000 m and varies in width from 50 m to 150 m. Within this zone, Archean basement gneisses are intensely hematite-altered, brecciated and cut by quartz stockwork veining associated with feldspar porphyry intrusions. High-grade uranium showings (with or without copper, molybdenum and silver) occur in outcrop and boulders along the entire trend. Historic work reported assays of 9.81% U_3O_8, 0.73% Cu, 0.475% Mo and 3.70 oz/ton Ag in an outcrop grab sample, and 2.14% U_3O_8 and 0.132% Mo (in outcrop) and 3.97% U_3O_8 (in a boulder).

The YAT showings were originally discovered in the late 1970s and consist of a number of high-grade uranium-copper-silver showings hosted in outcrop and boulders coincident with strong geophysical and geochemical anomalies covering an area at least 100 m north-south by 100 m east-west.

The REV area is located 10 km east of the BOG trend and is characterized by several vein-type uranium occurrences hosted in sheared Archean basement rocks. Historical sampling revealed assays of 0.36% U_3O_8, 0.31% U_3O_8 and 0.11% U_3O_8 from separate outcrop showings.

The focus of the 2007 field program was baseline geological mapping and prospecting designed to generate drill targets. A single representative sample of football-sized rubble from locally-derived frost heave collected in 2007 from the YAT trend returned 31.9 g/t Au, 1,170 g/t Ag, 1.18% Cu and 0.24% U_3O_8. Mineralized veins are hosted in sandstone and conglomerate located near the basin unconformity. Assays are pending from additional samples collected along the BOG trend.

YATHKYED LAKE PROPERTY

Operator
Uranium North Resources Corp.
Commodity
Uranium
NTS
65J/08
Location
300 km west of Rankin Inlet

The Yathkyed Lake property consists of one 18,026 ha permit over three known uranium showings originally discovered by Shell Canada in 1978. The showings occur relatively close to each other and uranium mineralization appears structurally controlled.

Uranium North Resources planned a comprehensive exploration program for 2007, including structural interpretation, airborne geophysics and prospecting to identify high- priority drill targets for 2008 evaluation.

Gold

Pat Lengyel, Kory Dumas, and David Kritterdlik mapping on Maze Lake gold property.
COURTESY OF TERRANE METALS

CHURCHILL (K)

Operator
Kaminak Gold Corporation

Commodity
Gold

NTS
55J, 55N, 55O

Location
70 km north of Rankin Inlet

Kaminak Gold Corporation retains 100% of non-diamond rights covering the Churchill Diamond Project currently operated by Shear Minerals Ltd. As part of this agreement, Kaminak has free access to any data collected for diamond exploration, including over 71,000 line-km of airborne geophysics and 7,500 archived till samples. Kaminak identified several high-priority gold targets on the Churchill Property.

The Sedna region displays highly-deformed, gold-bearing, banded iron formation over at least a six-km strike-length. Limited prospecting at Sedna resulted in the discovery of several gold anomalies in banded iron formation outcrop.

During 2006, drilling, prospecting and mapping activities were undertaken on the property. Prospective rock types and associated nickel geochemical anomalies have been outlined across the Churchill Property and remain to be verified.

KIYUK LAKE

Operator
Newmont Canada Ltd.

Commodity
Gold

NTS
65C/07, 65C/08

Location
350 km southwest of Arviat

Kiyuk Lake is an early stage gold exploration property operated by Newmont Canada Ltd, consisting of 63 mineral claims covering 48,000 ha. The property covers part of the Poorfish-Windy thrust fold belt, composed of early Proterozoic Hurwitz and Kiyuk Group low-grade metamorphosed sediments. Historic work by the GSC and past workers identified numerous gossans within the metasediments, some with elevated gold and arsenic, and multiple arsenic anomalies in lake sediments. Several gold showings have been discovered in local boulders and outcrops of Kiyuk and Hurwitz group sediments.

The 2007 field program followed-up on results from airborne geophysical surveys (magnetics, radiometrics, VLF and gravity) carried out in late 2006. IP/resistivity surveys were carried out over selected targets, along with mapping, soil and grab sample collection. Additional work is planned for 2008.

MATRIX GOLD

Operator, Partners
Kaminak Gold Corporation,
Pacific Ridge Exploration Ltd.

Commodity
Gold

NTS
65G/06, 65H/05, 65H/10
through 65H/12

Location
175 km west of Arviatt

Kaminak Gold Corporation is exploring the lower units of the Proterozoic Hurwitz Basin in the southern Kivalliq. The company considers the geological setting of the project area to be analogous to that hosting the Witwatersrand in South Africa.

Initial work done by the Hunter Exploration Group identified three gold-bearing pyritic conglomerate zones with grab samples assaying up to 16.0 g/t Au. During the 2006 season, geological mapping and prospecting done by Newmont uncovered new surface gold showings yielding assays up to 10.56 g/t Au. An additional 56,000 ha were staked, adding to the project area. Numerous priority targets have not been drill-tested. Kaminak has 100% ownership of all claims and prospecting permits. There is an option agreement between Kaminak and Pacific Ridge Exploration Ltd. covering the project area.

MAZE LAKE

Operator, Partner
Terrane Metals Corp.,
Laurentian Goldfields Ltd.

Commodity
Gold

NTS
55K/06

Location
45 km northwest of Whale Cove

The Maze Lake Project is an early-stage gold exploration property, located in the Hearne Structural Province of the Precambrian Shield in the eastern part of the Kaminak greenstone belt. Gold is associated with regional, northeast-trending structures which are commonly filled with Proterozoic sediments. Locally, Timiskaming-style sediments are associated with secondary structures. Large zones of pervasive carbonate alteration with disseminated sulphide mineralization occur along the northeast-trending splay structures.

Snowmachines silhouetted against evening sky, Spring 2007, Meadowbank.
COURTESY OF AGNICO-EAGLE

Past work by Sikaman Gold Resources Ltd. and WMC Resources Ltd. led to the identification of three gold grain till anomalies. Placer Dome acquired the property in 2003, and conducted reconnaissance mapping, till (frost boil), lake water and rock sampling, along with a high-resolution airborne magnetic survey over two seasons.

Laurentian Goldfields Ltd. entered into a joint venture with Terrane Metals Corp. to acquire the Maze Lake Property from Goldcorp, who had acquired Maze Lake from Barrick after their takeover of Placer Dome.

The 2007 field program, funded by Laurentian, included mapping and prospecting on three targets defined by Placer Dome in 2003-04, a detailed lake sediment survey, a soil survey, and 1500 m of drilling on the Haputilik Zone.

MEADOWBANK

Operator
Agnico-Eagle Mines Ltd.

Commodity
Gold

NTS
66H/01, 56E/04

Location
75 km north of Baker Lake

The Meadowbank project comprises a series of Archean-aged gold deposits hosted within polydeformed rocks of the Woodburn Lake Group. In February 2007, it was announced that Cumberland Resources Ltd. and Agnico-Eagle Mines Ltd. had entered into a definitive agreement in which Agnico-Eagle would make an all-share exchange offer for all outstanding and fully diluted common shares of Cumberland. The exchange was completed on July 9, 2007.

Four gold deposits have been discovered along the Meadowbank trend, a 25 km-long trend encompassing 35,000 ha of land. The known gold resources are situated within 225 m of surface, making the project amenable to open pit mining methods.

Meadowbank has proven and probable gold reserves of 2.9 million ounces (21.3 million tonnes grading 4.2 g/t Au). Since Agnico-Eagle assumed control of Cumberland, the exploration focus has been a resource to reserve conversion in the vicinity of the open pit reserves and further resource exploration around recent discoveries that have excellent potential. Drilling has been focused along the main Meadowbank Trend with a strike-length of over three km, exploring for potential extensions and new zones of mineral resources at the Goose South and Cannu zones. The drilling is also testing the mineral resource envelopes in, or near, the open pit reserves at the Portage and Goose Island zones. Incorporation of the 2007 drill results resulted in the upgrade of 600,000 ounces from the resource to reserve category. This 20% increase to probable gold reserves gives a total of 3.5 million ounces. The new reserves also include recently converted resources from the Cannu zone.

The Goose Island and Portage deposits are hosted by highly deformed magnetite-rich iron formation rocks, while an intermediate volcanic rock assemblage hosts the majority of the mineralization at the more northerly Vault Deposit. A zone of high-grade, near-surface gold mineralization, the Cannu Zone, was discovered and evaluated during the 2005 and 2006 drill programs.

Workshop at Meadowbank camp.
PHOTO BY K. COSTELLO

In all the deposits, gold mineralization is commonly associated with intense quartz flooding and iron sulphide minerals (pyrite and/or pyrrhotite).

The Portage gold deposits are defined over 1.85 km strike-length and cross lateral extents ranging from 100 m to 230 m. The geometry consists of a north-northwest-striking recumbent fold with limbs that extend to the west. The mineralization in the lower limb of the fold is typically 6 m to 8 m in true thickness reaching up to 20 m in the hinge area. The Goose Island deposit is similar in its geometry and setting to the Portage deposit, with a north-northwest trend and a steep westerly dip. The deposit is currently defined over a 750 m strike-length and down to 500 m at depth (mainly in the southern end) with true thickness of 10 m to 12 m. The Vault deposit is a planar and shallow dipping with a defined strike of 1,100 m. The deposit has been disturbed by two sets of normal faults striking east-west and north-south and dipping moderately to the southeast and steeply to the east, respectively. The main lens has an average true thickness of 8 m to 12 m. The hanging wall lenses are 3 m to 5 m.

New drilling at the Portage Zone has targeted sectors of the mineral resource within or immediately adjacent to the proposed open pit limit. At a depth of 150 m and immediately to the south of the proposed pit outline, several significant intercepts were recorded in the 2007 drilling program. These intercepts include high-grade gold mineralization, multiple intervals within a single hole and some thick intervals. To date, the Portage mineral resource has been traced for over 2.5 km, from the Portage Bay Island area near the current southern limit of the Portage Pit reserve northward to the Cannu Zone.

Drilling at Goose South encountered gold grades higher than average when compared to the overall Meadowbank mine project. Significant gold results included 11.8 g/t Au over 11.3 m in drill hole G07-675 and two separate intervals in hole G07-685 returning 8.9 g/t Au over 5.0 m and 6.4 g/t Au over 12.0 m.

Gold mineralization has been defined at moderate to shallow depths from the Goose South Zone over 300 m north to the limits of the Goose Island mineral resource envelope, a total extent of approximately 1.2 km. The relationship between this gold discovery and the deep zone of mineralization at Goose Island are not yet known. Both zones are open on-strike and at depth.

Overall, the 2007 drilling suggests continuous gold mineralization over 3.5 km spanning the Cannu, Portage, North Portage, Portage Bay Island, Goose South and Goose Island zones. The expanding gold mineralization envelope and the higher-grade intersections suggest the potential for a longer mine-life and possibly improved project economics as the results are incorporated into the current operating plan. The Marge Bay gold occurrence was discovered 4 km northeast of the Vault deposit, along with several base metal occurrences on the east and west sides of the property. Results from the 2007 exploration program will be considered in an update of the Meadowbank Feasibility Study. Initial gold production is anticipated by early 2010. Annual gold production is estimated to average 360,000 ounces over a nine year mine life.

MELIADINE EAST

Operator, Partner
Comaplex Minerals Corp.,
Resource Capital Fund

Commodity
Gold

NTS
55J/13, 55J/14

Location
25 km northeast of Rankin Inlet

The Meliadine East property consists of 19,829 ha, with a small gold resource called the Discovery Zone. It is estimated to contain an inferred gold resource of 2,030,000 tonnes at 3.0 g/t Au (for 398,000 contained ounces).

The Discovery gold mineralization is hosted by oxide iron formation and is associated with abundant quartz-carbonate veining and elevated sulphide content (arsenopyrite, pyrite, pyrrhotite). There is a strong similarity and continuity of geology and structural control between the East and West Meliadine properties.

In 2006, Cumberland Resources sold its 50% interest in Meliadine East to Resource Capital Fund III L.P. and Resource Capital Fund IV L.P. (collectively referred to as RCF).

RCF's interests are managed through Meliadine Resources Ltd. (MRL).

In 2007, MRL conducted data compilation, data verification, and initiated work on a new mineral resource estimate for the Discovery Zone. An independent engineering firm has been retained to prepare a NI 43-101 technical report.

MELIADINE WEST

Operator
Comaplex Minerals Corp.

Commodity
Gold

NTS
55K/16, 55N/01 55N/02, 55O/04

Location
25 km northwest of Rankin Inlet

The largest mineral resource on the Meliadine West property is the Tiriganiaq Deposit where gold mineralization is associated with sheared and sulphidized (pyrrhotite and arsenopyrite) iron formations, clastic, and mafic volcanic rocks. The mineralization is directly associated with quartz veins and an alteration assemblage of ankerite, sericite, and lesser chlorite. Similar gold mineralization is present in four small satellite gold deposits, the Pump, F, Wolf Main, and Wolf North Zones, all located within 5 km of the Tiriganiaq Zone.

In late December 2006, Troy Resources NL (Troy) announced that it had purchased a 19.5% equity stake in Comaplex from Gold Fields Limited for Australian $27 million.

A new resource estimate was completed on the Tiriganiaq gold deposit by Snowden Mining Industry Consultants Inc. of Vancouver and released in February 2007. The updated resource incorporates all of the drilling in the deposit, including that completed in the 2006 field season. From the surface to 170 m below surface (limit of potential open pit), using a cut-off grade of 2.5 g/t Au, the indicated gold resource is 5,180,300 t at 6.7 g/t Au, and the inferred gold resource is 1,910,300 t at 4.1 g/t Au. The potential underground gold resource below 170 m from surface, using a 6.5 g/t cut-off grade is 1,145,000 t at 10.6 g/t Au in the indicated category and 2,884,000 t at 11.4 g/t Au in the inferred category. The total contained ounces of gold are 1,502,900 (indicated) and 1,306,600 (inferred).

Comaplex completed 102 holes totalling 21,758 m on the property in 2007. Of this amount, 17 holes were for geotechnical purposes for site infrastructure. All of the core holes were completed on the Tiriganiaq deposit.

Heavy mineral processing of the 249 till samples collected in 2006 on the east end of the CWM claim block was completed in 2007. Of the 249 samples, a total of 192 samples returned potential diamond indicator results, with six samples returning in excess of 20 kimberlite garnets. Microprobe analysis of the recovered garnets was conducted. Significantly, the garnet dataset of 258 analyses included 76 sub-calcic G10 varieties, of which 14 are classified as diamond-associated (G10D) types. The G10D garnets were found in nine different samples, including several which had concurrent high garnet counts. This area is immediately up-ice from the recently announced discovery of diamonds in outcrop on the Churchill Property.

Surface exploration in 2007 to locate the source of the G10D garnet diamond indicators was limited to prospecting and mapping. No surface exposures of kimberlitic rock were found. More work on the diamond targets will be completed in the 2008 field program.

Start of boxcut for decline into Tiriganiaq deposit Sept 3.

COURTESY COMAPLEX MINERALS

In early August 2007, Comaplex received final approval from the regulatory agencies for its proposed underground exploration and bulk sampling program on the Tiriganiaq deposit. Portal excavation began in early August and was completed on October 5. The underground mining contractor mobilized its underground mining equipment to site from Rankin Inlet by heavy lift helicopter in September. Construction of site infrastructure was completed and the underground exploration program commenced on October 7, 2007. The underground portion of the program is expected to continue for approximately nine months.

A scoping study on the Tiriganiaq deposit is being compiled. As the 2007 drill hole assays are received, they will be incorporated into a new resource estimate and in ongoing scoping level studies. A completely re-engineered mine plan and costing analysis for the deposit is expected in 2008.

NAPAJUT PROPERTY

Operator
Exploratus Ltd.
Commodity
Gold
NTS
55E/04
Location
80 km west-northwest of Arviat

The property consists of four claims totalling 3,550 ha. Historical work, all done by Phelps Dodge, consisted of prospecting, trenching, geological mapping, soil sampling, and geophysical surveys. Anomalous gold values were recovered from a grab sample and two boulder trains. Trenching, geological mapping, additional boulder prospecting, a Mobile Metal Ion (MMI) soil geochemical survey, and a magnetometer and VLF survey were subsequently carried out over the areas of interest.

The mineralized host rocks that make up all of the boulder trains and especially the Northeast Boulder Train are mainly quartz-veined sericite schists, carrying up to 25% pyrite, minor arsenopyrite and pyrrhotite. The Northeast Boulder Train was the primary focus of the last exploration program on the property.

Exploratus Ltd. optioned the property from Phelps Dodge in 2004. Exploratus is planning for a 2008 field program.

SY GOLD

Operator, Partners
Corsa Capital Ltd.,
Kaminak Gold Corporation,
Hunter Exploration Group
Commodity
Gold
NTS
65I/14, 65I/15
Location
250 km west of Whale Cove

The SY property covers over 48,600 ha of the Archean Yathkyed greenstone belt, considered similar to other gold-bearing greenstone belts in the Kivalliq including the Woodburn Lake Belt and the Rankin Inlet Belt. In 2007, a program of geological mapping, prospecting and ground inspection of known gold occurrences was conducted.

Slinging core to Meliadine West camp.
PHOTO BY K. COSTELLO

Nickel – Copper – Platinum Group Elements (PGE)

Elders group visiting Ferguson Lake project. COURTESY STARFIELD RESOURCES

FERGUSON LAKE PROJECT

Operator
Starfield Resources Inc.

Commodities
Nickel, Cobalt, Copper, Platinum, Palladium

NTS
65I/09 through 65I/15, 65J/14, 65J/16, 65O/01, 65P/03, 65P/04

Location
160 km south of Baker Lake

The Ferguson Lake deposit is a Ni-Cu-PGE deposit, hosted by moderately to weakly foliated tholeiitic gabbro-hornblendite layered intrusions, referred to as the Ferguson Lake Igneous Complex. Nickel, copper, cobalt, platinum and palladium bearing semi-massive to massive sulphides occur in lenses intercepted in drill hole intersections over a 15.5 km east-west strike-length across the property. A NI 43-101 compliant mineral resource estimate was released in May 2007, incorporating the 1950-1957 historical data (173 drill holes) and data collected by Starfield (1999-2006) from 359 new holes totalling 133,214 m of drilling. The indicated resources for the Main West Zone are 15.2 million t at 0.71% Ni, 1.04% Cu, 0.08% Co, 1.64 g/t Pd and 0.28 g/t Pt. Additional inferred resource estimates were determined for the Extension West Zone, East Zone, as well as the Main West Zone and are 19.4 million tonnes at 0.68% Ni, 1.13% Cu, 0.08% Co, 0.28 g/t Pd, and 1.75 g/t Pt.

The 2007 drill program got underway late summer and was designed to test the low-sulphide platinum group element (LS-PGE) horizon along strike in the Main West Zone, foreseen as the possible location of an open pit mine. Recent drilling has intersected the LS-PGE horizon, interpreted by the company as similar to the South African style of PGE mineralization, and about 50 m below the Ni-Cu-Co-Pd-Pt massive sulphide lenses, along a strike length exceeding one kilometre. Assay results from the first five holes identified significant intervals and grades of platinum and palladium in all holes, with a high value of 39.25 g/t Pt and 9.44 g/t Pd over 1.35 m reported.

Based on detailed mapping and sampling work completed in 2006, Starfield believes the Ferguson Lake Igneous Complex to be more extensive than previously thought, and also believes that the potential exists for discovery of disseminated PGE mineralization at surface along its entire strike length. The 2007 field program included plans to systematically collect samples across the magmatic layering of the South Discovery -West Zone South Intrusion (west of the Main West Zone), and across the layered and gossanous mafic plutons on the east side of Ferguson Lake.

The newly constructed all-season base camp near the Main West Zone is now fully operational with airstrip construction to be completed in 2008.

MUM CLAIMS

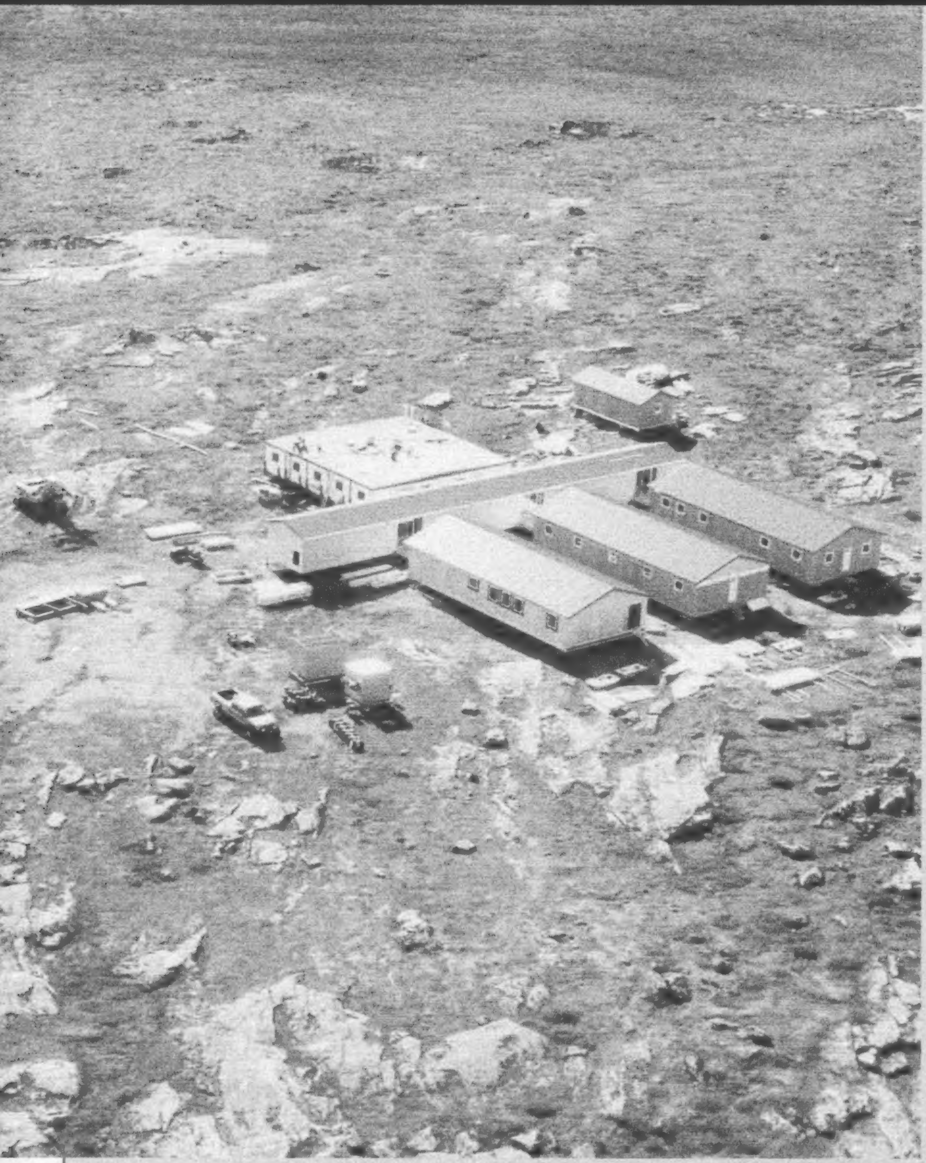
Operator, Partner
Cascadia International Resources Ltd., Tanqueray Resources Ltd.

Commodities
Nickel, Platinum, Palladium

NTS
66A/02, 66A/03, 66A/06, 66A/07

Location
75 km west of Baker Lake

The Mum property consists of 22,412 ha on 22 mineral claims, and the underlying rocks



New Ferguson Lake camp.
PHOTO BY K. COSTELLO

are considered to have a komatiitic nickel, platinum, palladium potential and unconformity-associated u[illegible]um potential. In 2007, Cascadia signed a letter of intent to earn a 50% interest in the Mum claims held by Tanqueray Resources Ltd.

Grab samples from an area near the center of the Mum claims assayed up to 11% Ni and 16 g/t of Pt and Pd. Cascadia commissioned an airborne electromagnetic, magnetic and radiometric survey over the entire property in 2007, as well as ground reconnaissance in order to prepare for a 2008 summer drill program.

✚ RAINBOW PROPERTY

Operator
Pure Nickel Inc.

Commodies
Nickel, Gold

NTS
66G/06, 66G/07

Location
260 km west of Arviat

The Rainbow property consists of 36 contiguous mining claims covering 32,498 ha. A series of komatiitic and basaltic flows crop out over the 30 km length of the property. Work by Falconbridge in 2004 confirmed the presence of nickel mineralization near Rainbow Lake in the area referred to as the Main Zone.

Mineralization occurs in outcrop and drill sections as fine disseminations within peridotites assaying less than 0.8% Ni (grab and drill core). Massive sulphide boulders were located on surface at one location, the Main Zone Showing, and five boulder samples assayed from this location ranged between 1.93% to 2.23% Ni (with 30.1 to 37.4% S). A sample of oxide iron formation in outcrop, with fine, dark bands of magnetite and trace sulphides, was collected 17 km northeast of the original Rainbow claims. This sample, assayed 26.5 g/t Au and 2.69% S.

Pure Nickel acquired the mineral rights from Xstrata Nickel in 2007 and is currently evaluating the property.

✚ TARGET 87

Operator
BHP Billiton

Commodies
Nickel, Cobalt, Copper, Platinum, Palladium

NTS
65F/14

Location
385 km west of Arviat

The Target 87 property consists of two prospecting permits which host a poorly exposed large gabbro complex, considered to have potential for high volume magmatic sulphide deposits.

The Target 87 project area has received little exploration attention historically. The area is spatially related to the Snowbird tectonic zone and is spatially associated with large mafic and ultramafic intrusions which are prospective hosts of nickel and copper mineralization.

Qikiqtani District

The Qikiqtani District is the largest district within Nunavut, covering Baffin Island, islands of the High Arctic (Ellesmere as the largest, Devon, Axel Heiberg, Prince of Wales, Bathurst, Cornwallis), and northern Melville Peninsula.

Most of the mineral tenure currently held was selected based on its prospectivity for kimberlites. Systematic exploration efforts have resulted in the identification of areas with concentrations of kimberlite indicator minerals, kimberlite float, and in-situ kimberlite on several of the diamond properties.

The AV9 kimberlite pipe was discovered in 2007. A total of 307.26 kg (dry) of kimberlite core from AV9 was submitted for caustic fusion and returned 236 diamonds (stones retained on a 0.106mm square mesh sieve). The three largest stones had dimensions measuring 2.324 x 2.307 x 1.804 mm, 1.871 x 1.529 x 1.531 mm and 1.665 x 1.403 x 0.892 mm. Prospecting identified two new kimberlites within the Qilalugaq property. Drill-testing of kimberlite and potential kimberlite targets was conducted on several other Baffin Island properties.

The search for uranium on the Nunavut mainland also spread to Baffin Island in 2007, with prospecting permits being acquired over prospective terrain at the north end of the island. As with the majority of these land packages elsewhere in the territory, the prospecting permits cover Proterozoic sedimentary rocks (Borden, Fury-Hecla basins).

The Qikiqtani District is host to Nunavut's single largest exploration program: Baffinland Iron Mines' Mary River Iron Ore project. The company announced a budget of $90 million to cover 2007 and 2008 activities including: a 250,000 tonne bulk sample; road construction from site to tidewater; expansion of the camp to a year-round facility with 200 person capacity, and on-going geotechnical and geomechanical studies.

The Central Baffin area continues to show its gold potential. The sixteenth gold occurrence was discovered by Commander Resources along a 140 km greenstone belt near the Dewar Lakes area. ■

Base camp for Mary River Iron Project.

COURTESY GN EDT

Base Metals

NANISIVIK MINE

Operator
Canzinco Ltd.
(Breakwater Resources Ltd.)

Commodities
Zinc, Silver

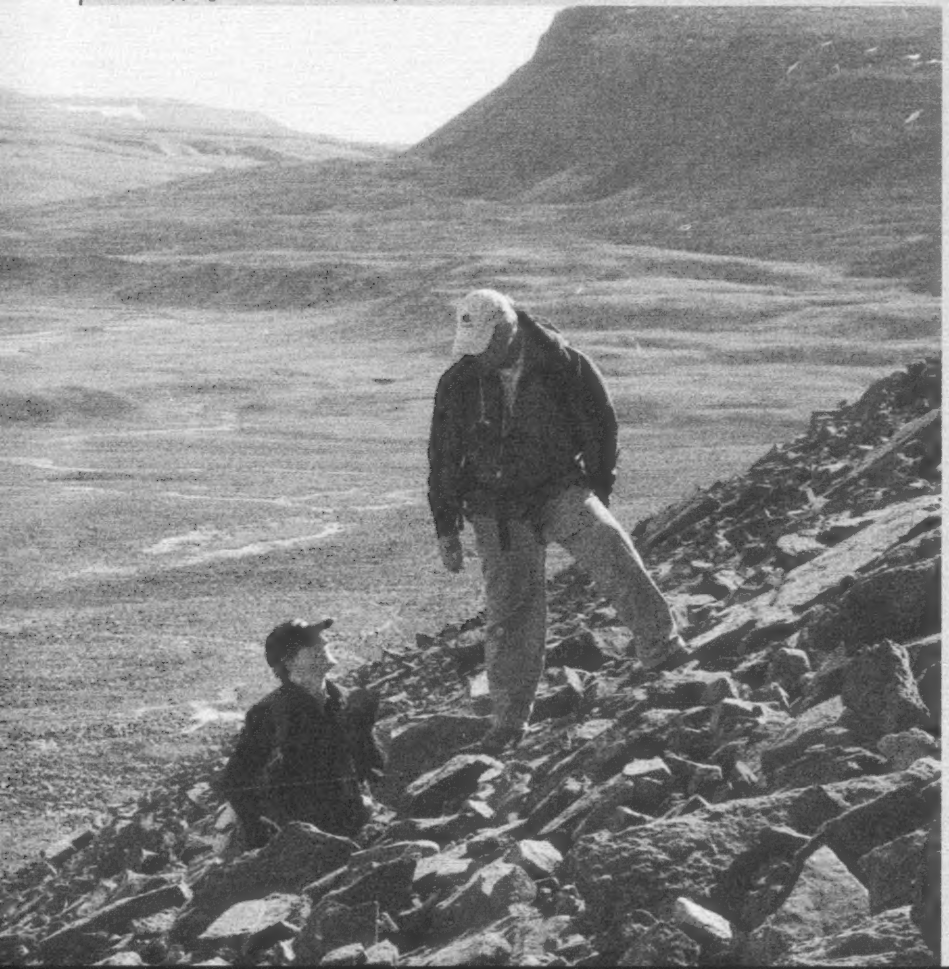
NTS
48C/01

Location
35 km east of Arctic Bay

The Nanisivik Mine went into production in 1977. Production ended in 2002 during a period of low metal prices. In the last year of production, the mine produced 516,544 t of ore grading 10% Zn and 42 g/t Ag. In June 2004, the NWB gave its approval for the company to proceed with a closure and reclamation plan. These closure and reclamation activities were initially anticipated to be finished in 2005; however, the work was delayed and completed in 2006. Work included removal of the remaining infrastructure, placement of cover material on the tailings pond, removal of contaminated soils from targeted areas and the commencement of post-closure monitoring. Beginning in 2007 and for a minimum of five years, geotechnical and environmental monitoring of the site will be conducted to ensure the integrity of the reclamation work.

In 2003, Canzinco entered into an agreement with Wolfden Resources who purchased the Nanisivik industrial complex, including milling equipment and related infrastructure, four diesel electric generators, the ship-loading facility and the concentrate storage building. In return for the purchase, Wolfden agreed to reclaim the industrial complex site and immediate area to the permitted specifications.

Field mapping in North Baffin area by Dr. Elizabeth Turner and Dr. Donald James. COURTESY CNGO



POLARIS

Operator
Teck Cominco Ltd.

Commodities
Lead, Zinc

NTS
66H/08

Location
Little Cornwallis Island,
90 km northwest of Resolute Bay

The Polaris Mine on Little Cornwallis Island, once the most northerly mine in the world, commenced production in 1980. The principal metals extracted were zinc and lead at a production level of 152,700 t in 1997. Zinc comprised just over 12% of the ore mined and lead accounted for about 3.5%. The mine closed in 2002, and operator Teck Cominco decommissioned the mine and reclaimed the site. Hazardous materials from the site were transported to southern Canada for recycling or disposal, and reclamation was completed in 2004. Site monitoring, particularly related to water quality to ensure that metal levels continue to be well below allowable levels, will continue through to 2011.

◇ AVIAT

Operator, Partners
Stornoway Diamond Corporation,
BHP Billiton Diamonds Inc.,
Hunter Exploration Group

Commodity
Diamonds

NTS
47C, 47D

Location
40 km west of Igloolik

Aviat camp. PHOTO BY K. COSTELLO

The Aviat Joint venture covers 890,000 ha on the Melville Peninsula and is operated by Stornoway Diamond Corporation. Through progressive till sampling, prospecting and drill testing, priority target areas have been identified, leading to the kimberlite discoveries.

Drilling activities in 2007 focused on the Eastern Sheet Complex, initially thought to comprise eight kimberlite sheets. Forty-five drill holes (4,828 m) were completed, with 36 intersecting kimberlite, including the discovery of the AV9 kimberlite pipe. Drilling defined consistent kimberlite intersections within a 1.5 km^2 area of the Eastern Sheet Complex. Field activities helped to delineate and extend a series of stacked, flat-lying kimberlite sheets up to approximately 7 m thick, enhancing the tonnage potential.

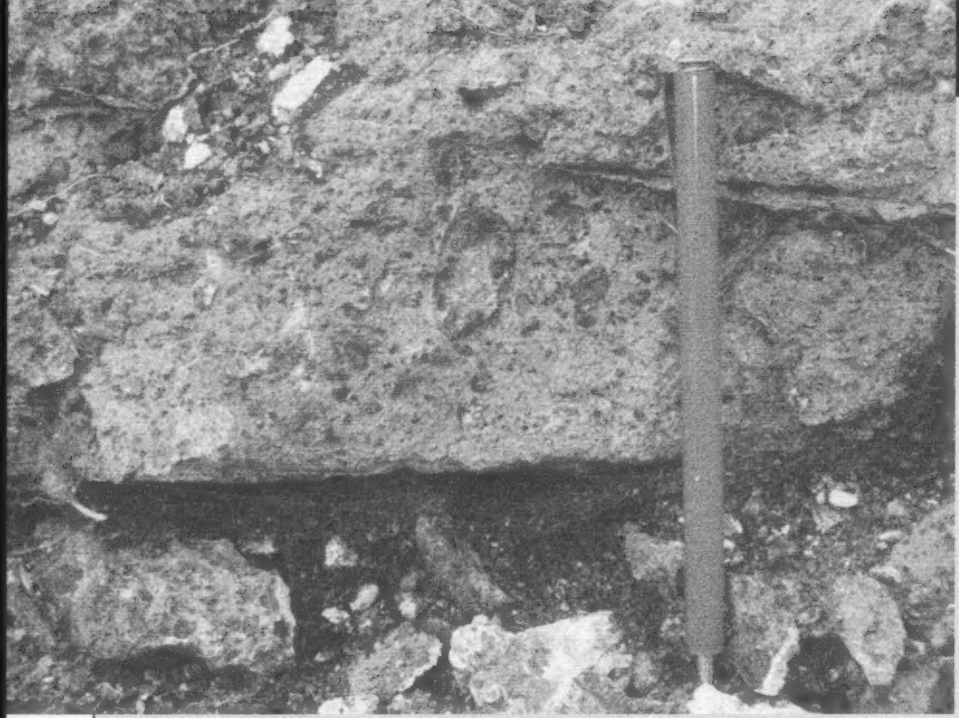
The AV9 kimberlite pipe was discovered in 2007. A total of 307.26 kg (dry) of kimberlite core from AV9 was submitted for caustic fusion and returned 236 diamonds (stones retained on a 0.106 mm square mesh sieve). The three largest stones had dimensions measuring 2.324 x 2.307 x 1.804 mm, 1.871 x 1.529 x 1.531 mm and 1.665 x 1.403 x 0.892 mm. AV9 lies four km east-southeast of the diamondiferous AV1 kimberlite pipe, which has previously returned a diamond content of 0.83 c/t.

Bulk samples totalling 70 tonnes were collected from three kimberlites for macrodiamond recovery through a Dense Media Separation (DMS) plant: 44.6 t from the AV1 kimberlite; 27.4 t from the AV2 kimberlite; and 2.05 t from the AV8 kimberlite. Follow-up till sampling was undertaken, with 1,177 samples collected for indicator mineral processing, and 600 other surface samples acquired for further work.

The current interpretation suggests that the AV2 Lower, AV6, AV7, AV7E and certain other intersections belong to a single, sheet-like kimberlite body (AV267), with an approximate strike-length of 2 km with a true thickness of about 3 m (ranging from 2.5 to 4.0 m) in most areas. The sheet appears to thicken from northeast to southwest, achieving widths of up to 7 m. Three roughly rectangular and contiguous 'blocks' of kimberlite within the AV267 sheet have been tested with an irregular drill pattern. The first 'block' had nine holes drilled in kimberlite, tested over a strike-length of about 900 m and for about 350 m down dip, and represents a body striking at about 100° and dipping about 8° to the southwest. The second 'block', tested by 12 holes that intersected kimberlite, has a strike of 800 m and a down-dip extension of about 500 m. This block strikes at 065° and dips 8 to 10° to the southeast. Both of these 'blocks' are open down dip. To the east, a third 'block' of kimberlite is contiguous with the other two, has a 065° strike and dips of 8 to 10° to the southeast, and has been intersected over an area of about 800 m x 400 m. Drilling on this 'block' suggests the sheet pinches out both along strike and down dip. Changes in the strikes and dips of the 'blocks' are currently attributed to flexures or roll-overs of the kimberlite sheet following reasonably predictable zones of pre-existing weaknesses within the gneissic host rocks. Based on this interpretation and results from mini-bulk samples, the sheet has a preliminary diamond content of approximately 0.86 c/t (based on > 0.85 mm^2 sieve).

The other stacked kimberlites of the Eastern Sheet Complex (AV2 Upper, AV3, AV5, AV8 Upper, AV8 Middle and AV8 Lower) were not tested by the 2007 drill program.

A 3 m thick, sheet-like kimberlite body was also intersected on the west side of the regional fault that hosts the AV1 and AV9 kimberlites. This fault is believed to have influenced emplacement of the other Aviat kimberlite pipes and sheets. The 3 m intersection occurs 50 m deeper than the sheet on the east side of the fault, suggesting that this is possibly a function of 'stepping' up or down across the fault during emplacement, and requires additional drilling to determine its lateral extent.



Close-up of kimberlite in outcrop at AV1.
PHOTO BY K. COSTELLO

◊ BAFFIN ISLAND

Operator, Partner
De Beers Canada Inc.,
Pure Diamonds Exploration Inc.

Commodity
Diamonds

NTS
47E, 47H

Location
160 km southwest of Arctic Bay

The Baffin Island project area is located in Archean basement rocks of the Mary River Group, consisting dominantly of migmatitic gneiss. Within the core of the project area, De Beers has delineated a kimberlite boulder train, over a length of 50 km, with prospective mineral chemistry and microdiamond recoveries. Microdiamond analysis has now been completed on three sets of boulder samples from the Baffin Island boulder train. In total, 969.1 kg of samples were tested by caustic fusion for microdiamond content. Over 2,700 microdiamonds and 67 macrodiamonds were recovered.

Two kimberlite dykes have been discovered near Erichsen Lake. The Amon kimberlite consists of two sheets gently dipping north with approximate accumulated thicknesses ranging from 0.2 m to 2 m. Situated 2 km east of Amon, the Aliguja kimberlite occurrence is also a sheet-like body dipping gently to the northwest with thicknesses ranging from 0.4 m to 1 m.

The 2007 drilling program evaluated several geophysical targets defined by previous airborne EM surveys and continued evaluation of the Aliguja kimberlite discovered in 2006. The confirmation of lateral and down-dip continuity of Aliguja is encouraging despite intersections of less than one metre.

◊ BAUMANN PROJECT

Operator, Partners
Indicator Minerals Inc.,
Stornoway Diamond Corporation,
Hunter Exploration Group

Commodity
Diamonds

NTS
49D

Location
South end of Ellesmere Island

Prospecting permits were acquired by Hunter Exploration Group in February 2005, with further optioning to Indicator Minerals and Stornoway Diamond Corporation. In the 2005 field season, 123 heavy mineral samples were collected. No results have been reported to date.

◊ BORDEN (I)

Operator, Partner
Indicator Minerals Inc.,
Committee Bay Resources Ltd.

Commodity
Diamonds

NTS
47H, 48A

Location
110 km southeast of Arctic Bay

The Borden property consists of nine prospecting permits, covering 205,685 ha. Indicator has the option to earn a 70% interest in the Borden property from Committee Bay Resources.

Initial heavy mineral samples from a field program in 2004 returned kimberlite indicator minerals in one area of the property. An additional 30 samples were collected in 2005. Indicator continued evaluation of the property with regional sampling during the 2007 field season.

◊ BORDEN (P)

Operator
Patrician Diamonds Ltd.

Commodity
Diamonds

NTS
48A, 48B

Location
90 km southeast of Arctic Bay

Patrician's Borden property covers 89,034 ha. Prospecting, till sampling and reconnaissance stream sediment sampling has resulted in the discovery of eight kimberlites in outcrop and an additional five areas of unsourced kimberlite rubble in glacial drift. Samples from several of the kimberlites in outcrop, which form a cluster of dykes and small diatremes in the central part of the property, returned only a few microdiamonds.

A 0.31 carat diamond was recovered from a small, angular sample of kimberlite boulders collected from a stream bed in the northern part of the claims. The bedrock source is believed to be less than a few hundred metres up-slope of the sample site.

Data from a recent airborne survey show a number of prospective magnetic anomalies that are circular to oval in shape and range in size from a few hectares to over ten hectares. These anomalies occur as clusters of three or more discrete targets located in the central, western and northwestern parts of the property, and correspond closely with positive kimberlitic indicator mineral samples previously taken.

A program of prospecting, ground evaluation of the magnetic targets, and follow-up sampling was planned for 2007. Due to logistical challenges and weather issues, this program has been re-scheduled until 2008.

BRODEUR

Operator, Partner
Diamondex Resources Inc.,
Kennecott Canada Exploration Inc.

Commodity
Diamonds

NTS
48B/02 through 48B/04, 48C/04 through 48C/06, 48C/11, 48G/11 through 48G/14, 48H/08, 48H/09, 58D/06

Location
100 km northwest of Arctic Bay

The 2007 exploration program consisted of ground geophysics, till and stream sediment sampling and diamond drilling. A total of 700 line-km of ground magnetics were completed over 18 grids covering approximately 20 km^2. The exploration area included the Tuwawi and Nanuk kimberlites as well as the Kuuriaq kimberlite corridor.

Results are pending from the 512 till and stream sediment samples collected over the project area. The resulting heavy mineral concentrates will be picked for kimberlite indicator minerals.

The 2,200 m diamond drill program was designed to better define the geometry of the Tuwawi kimberlite body and to extract sufficient kimberlite to allow for estimations of potential diamond grades and quality. A total of 3,110 kg of hypabyssal, fine- to medium-grained macrocrystic kimberlite was collected from 12 holes that intercepted Tuwawi. A drill hole designed to test the Tuwawi Deep target which was outlined by ground magnetic and gravity surveys was abandoned due to drilling difficulties and will be re-tested during the 2008 drill program.

In addition to the Tuwawi drill program, 14 holes were completed over the Nanuk and Kuuriaq target areas. Four new kimberlite bodies were intersected at the Nanuk cluster, and the Kuuriaq corridor of kimberlites was extended to 4 km. A total of 3,325 kg of kimberlite from these drill intercepts was collected for caustic fusion processing and diamond recovery. Results are pending.

With the 2007 project expenditures, it is expected that by the end of the fiscal year, Diamondex will have earned a 100% interest in the project from Kennecott.

BRODEUR DIAMOND (JACKSON INLET)

Operator
Atlanta Gold Inc.

Commodity
Diamonds

NTS
58D/01, 58D/08

Location
100 km west of Arctic Bay

The official change of name from Twin Mining Corporation to Atlanta Gold Inc. was announced in a March 2007 press release.

An independent technical review was conducted to identify high-priority targets and 38 magnetic anomalies with characteristics reflective of shallow intrusive bodies, such as kimberlite pipes, were identified. Of these 38 targets, 12 were recommended as priority sites for investigation by ground geophysical surveys and drilling. Atlanta Gold proposes future exploration focused on 67 mineral claims covering 613 km^2

Core logging and sampling at Brodeur Project.
COURTESY DIAMONDEX

that appear to have potential for diamond discovery.

The Company indicates that a number of parties have expressed interest in funding resource definition drilling and bulk sampling of the Freightrain and Cargo 1 kimberlites, as well as the drilling of a number of the untested magnetic anomalies with signatures suggestive of kimberlite pipes.

Although no field program was carried out during 2007, Atlanta Gold expects to complete arrangements to allow a significant program to be conducted during 2008.

◊ CAPE OSBORNE

Operator, Partner
De Beers Canada Inc.,
Pure Diamonds Exploration Inc.

Commodity
Diamonds

NTS
48E, 48F, 48G, 48H; 58E, 58H, 58G; 59A, 59B, 59C

Location
Southwest side of Devon Island

Devon Island is situated within the stable craton of the Churchill Structural Province of the Canadian Shield. Precambrian crystalline rocks are exposed mainly in the ice-covered eastern part of Devon Island and are part of a dissected highland belt that extends from Baffin Island to southeastern Ellesmere Island forming the eastern margin of the Canadian Arctic Archipelago. Most of the Phanerozoic succession on Devon Island consists of Lower Paleozoic rocks that form a wedge of relatively undeformed sediments which thicken towards the west overtop of the crystalline basement.

Processing and analysis of reconnaissance till samples collected in 2006 resulted in the identification of two large kimberlite indicator mineral areas within the Eden Point prospecting permit block. The companies have now split this project into the Cape Osborne (west side of Devon Island) and Cornwallis properties. The wide regional spacing of the 2006 sampling and subsequent recovery of numerous indicator minerals with diamond inclusion-type chemistry (G-10) indicates the potential of multiple diamond-bearing kimberlite sources within both areas.

During 2007, follow-up activities focused on prospecting and sampling areas within 17 permits on the Cape Osborne property. Results are pending.

◊ CHIDLIAK[1], FOXE BASIN[2], MIRAGE BAY[3]

Operator, Partner
Peregrine Diamonds Ltd.,
BHP Billiton Diamonds Inc.

Commodity
Diamonds

NTS
26A, 26B, 26L, 26M, 36I, 36N, 36O, 36P, 37A, 37B

Location
100 km north of Iqaluit[1]; 700 km northwest of Iqaluit[2], covering islands in the Foxe Basin; 400 km northwest of Iqaluit[3]

Peregrine has acquired prospecting permits totalling over two million ha in the Baffin Island region. The three project areas, Chidliak, Foxe Basin and Mirage Bay, are the result of two agreements involving regional diamond exploration programs between Peregrine and BHP Billiton. BHP Billiton has retained back-in rights which provide that, under various scenarios, BHP Billiton may acquire up to a 65% interest in any of these properties by reimbursing Peregrine up to 400% (up to a maximum of US$40 million) of exploration expenditures incurred per project area.

Annual sealift ship unloading at Iqaluit.
PHOTO BY K COSTELLO

Ice-covered Fury and Hecla Strait, June 2007.
PHOTO BY K. COSTELLO

(Below) Frost removal on wing of Beechcraft King Air.
PHOTO BY L. HAM

Reconnaissance heavy mineral sampling programs conducted by Peregrine and BHP Billiton in 2005 and 2006 in all three areas recovered significant kimberlitic indicator minerals including highly prospective eclogitic and pyrope garnets, some with compelling G10 chemistries and fresh surface textures. These indicator mineral chemistries and surface textures suggest the possibility of diamondiferous kimberlites within the areas.

In addition to heavy mineral sampling, Goldak Airborne flew a fixed-wing aeromagnetic survey in 2006, using 250 m line-spacing, over the southern half of Prince Charles Island in the Foxe Basin Project. This survey produced 14 generally large geophysical anomalies that, in conjunction with the encouraging indicator mineral results, may be indicative of concealed kimberlite intrusions.

Peregrine's 2007 program covered all three permit blocks. The overall rationale was to better define the indicator mineral trains and constrain an up-ice indicator cut-off. On the Mirage Bay Project, 300 heavy mineral samples were collected; at Chidliak, 200 heavy mineral samples collected; and on the Foxe Basin Project, 150 heavy mineral samples collected. Fourteen aeromagnetic anomalies identified on Prince Charles Island were followed up with detailed ground-based magnetic surveys. An additional 200 heavy mineral samples were collected from other islands within the Foxe Basin project area to better define the indicator minerals trains.

◊ CORNWALLIS ISLAND

Operator, Partner
De Beers Canada Inc.,
Pure Diamonds Exploration Inc.

Commodity
Diamonds

NTS
58G

Location
60 km north of Resolute Bay

The Cornwallis project area covers the majority of Cornwallis Island which is located in the Cornwallis Fold Belt associated with the Boothia uplift. The bedrock of the Cornwallis Island property ranges from Ordovician to early Tertiary but is dominated by Ordovician through Devonian carbonates with mixed clastic-carboante units.

The Cornwallis property was originally part of the Eden Point prospecting permit project but identification of two large kimberlite indicator mineral areas in 2006 within the Eden Point prospecting permit block divided the project into the Cape Osborne property and Cornwallis property.

On the Cornwallis property, the 2007 exploration program commenced in July and included a 30,000 line-km low-altitude high-resolution airborne magnetic survey. The survey was flown at 100 m line-spacing with mean terrain clearance of 20 m. In addition, reconnaissance sampling was conducted over the prospecting permits that cover the north half of Cornwallis Island. Follow-up sampling was undertaken to define the potential source of the indicator minerals, with sediment samples collected at anomalous 2006 sample sites. The program was designed to accelerate target identification through the use of low-level, closely-spaced magnetic surveys, satellite and air photo interpretation and detailed sampling and prospecting. Several magnetic anomalies from the airborne survey have been selected for follow-up and drill-testing. Sample results are pending.

DORSET

Operator
Indicator Minerals Inc.
Commodity
Diamonds
NTS
36C/06, 36C/09 through 36C/13
Location
60 km north of Cape Dorset

Based on internal target generation methods, Indicator Minerals acquired 21 three-year prospecting permits in February 2007 covering prospective terrain for diamond exploration. The permits are located north of Cape Dorset, at the westerly end of the Meta Incognita Peninsula.

MUSKOX HILL

Operator, Partner
De Beers Canada Inc.,
Pure Diamonds Exploration Inc.
Commodity
Diamonds
NTS
67G, 67H, 68A, 68B, 68C, 68D
Location
Prince of Wales Island

The Muskox Hill prospecting permits, covering all of Prince of Wales Island, were acquired by De Beers based on historic kimberlite indicator mineral results from stream sediment samples collected more than twenty years ago. The GSC conducted broad regional stream sediment sampling programs across the island. Positive kimberlite indicator mineral results were identified and formed the basis of the 2006 programs. These programs on the Muskox Hill consisted of follow-up detailed stream sediment sampling. To date, no results have been released.

TIMMIJUUQ

Operator
Peregrine Diamonds Ltd.
Commodity
Diamonds
NTS
25P/02, 25P/07, 25P/08
Location
200 km west of Iqaluit

Six permits were acquired in 2006 on the east coast of Baffin Island in terrain considered prospective terrain for kimberlites. To date, no work has been publicly reported.

Energy Sources: Coal

NUNAVUT COAL PROPERTY (NORTH FROSHEIM[1], MAY POINT[2])

Operator
West Hawk Development Corporation
Commodity
Coal
NTS
1 - 49G/09, 49G/10, 49G/15;
2 - 49G/02, 49G/07, 49G/08
Location
8 km south of Eureka; 1 - Ellesmere Island; 2 - Axel Heiberg Island

In 2006, West Hawk Development Corporation acquired seven coal licenses (99,518 ha) to form its Nunavut Coal Prospect, located over two project areas on either side of Eureka Sound.

There are two separate coal areas within the coal licenses and these are the North Fosheim Peninsula Property and the May Point Property. Coal seams are hosted within the Tertiary Eureka Sound Group. The major coal zone lies approximately 850 m above the base of the Eureka Sound Group and has been named the Fosheim Coal Zone. This coal zone crops out in the southeast portion of the Fosheim property. Coal seams range from lignite to subbituminus B.

No work has been done in the areas since 1981. Additional exploration, including drilling, is required to generate an inferred resource estimate under NI 43-101. In a November 2007 news release, West Hawk indicated it was working towards verifying the coal resources.

STRAND FIORD COAL

Operator, Partner
James Bay Energy Ltd.,
First Nephi International Inc.
Commodity
Coal
NTS
59G/01, 59G/08, 59H/03
through 59H/06
Location
515 km north of Resolute Bay, on the west side of Axel Heiberg Island

James Bay Energy has held the coal licenses covering the Kangut Peninsula of Strand Fiord on Axel Hieberg Island for several years. The island lies immediately west of Ellesmere Island within the Sverdrup Basin. No activity has been reported on the license since 2004; however, the licenses are in good standing.

Energy Sources
Uranium ❋

❋ BORDEN[1], FURY-HECLA[2]

Operator, Partner
UNOR Inc., Cameco Corporation
Commodity
Uranium
NTS
1 - 48A, 48B
2 - 47F
Location
50 km south of Arctic Bay[1],
180 km northwest of Igloolik[2]

Ripple marks in Whyte Inlet Formation.
COURTESY UNOR

Cameco acquired 27 prospecting permits in February 2007: 15 in the northern Borden block (Nanasivik and Robertson River areas) and 12 in the southern Fury-Hecla block. The permits were incorporated into a joint venture with UNOR Inc.

A three-week evaluation program was completed by Cameco and UNOR in 2007. The study concentrated on evaluating the alteration and porosity within the basinal sandstones and the nature of the unconformable contact with the basement rocks. A zone of radioactivity running 5000 cps was discovered in porphyritic granite in the central part of the Robertson River area. Several of the historical showings associated with the granite within the Fury-Hecla permit block were sampled. 206 surface rock samples were collected for assay and 68 surface rock samples were collected for mineralogical studies. Assay results are expected during the first quarter of 2008.

Gemstones ★

★ BELUGA SAPPHIRE

Operator
True North Gems Inc.
Commodity
Sapphires/Fancy Sapphires
NTS
25K/13
Location
3.5 km southwest of Kimmirut

The sapphires discovered on Southern Baffin Island are hosted in a desilicified syenitic pegmatite lens in the marble of the Lake Harbour Group of sediments. The sapphires were discovered by independent prospector brothers Nowdluk and Seemeega Akpiq in 2001. In 2003, True North Gems optioned the Beluga Sapphire occurrence from the brothers. At that time, there were two known occurrences of sapphires with the Beluga occurrence being the main showing and the Narwhal being the second occurrence. The sapphires are natural blue, yellow and colourless.

True North Gems collected a 4.29 tonne sample in 2004 from the Beluga deposit and also discovered four additional sapphire occurrences. The results of the bulk sample yielded rough sapphire averaging 790.7 c/t. The grade of gem-quality and near-gem quality sapphires was 33.1 c/t and 115.0 c/t, respectively. An independent evaluation of a portion of the sapphires that were processed showed an average price of US$570.85 per tonne.

Prospective outcrops, trenches and drill core intervals were identified during 2005 drilling. The 2006 drilling program consisted of 40 holes (1,482 m), concentrated on several high-priority targets hosting visible, colourless to deep blue, pink and yellow sapphires. Numerous pods exhibiting mineralogical similarities to the main Beluga sapphire occurrence were identified. Drilling confirmed the widespread presence of several minerals spatially associated with sapphire mineralization in each of the Beluga, Muktuk and Bowhead occurrences. The 2007 field program focused on prospecting and mapping. A new sapphire prospect was discovered, named the Kikturiaq (Mosquito) occurrence. The samples collected from the surface exposure included several sapphires: the largest is a near-complete crystal weighing 27.85 grams (139.24 carats).

Kimmirut.
PHOTO BY K. COSTELLO

Iron

MARY RIVER IRON ORE DEPOSITS

Operator
Baffinland Iron Mines Corp.
Commodity
Iron Ore
NTS
37G/05
Location
160 km south of Pond Inlet

Four iron ore deposits, Deposit 1, 2, 3 and 3A, have been identified in the Mary River area and all are located on mineral leases held 100% by Baffinland. The proposed Mary River iron project will involve the development of Deposit No. 1 on Nuluujaak Mountain. In early 2008, Baffinland anticipates releasing its definitive project feasibility study (DFS) and expects to submit regulatory applications and a formal project description of the proposed works to regulators. A comprehensive Environmental Impact Statement (EIS) is expected to be submitted in the latter half of 2008. The DFS is expected to build on Aker Kvaemer Canada Inc.'s Scoping Study released in 2006 and this study will include expansion of the proposed annual output from Deposit No. 1 from the 10 million dry metric tonnes (dmt) per year assumed previously to 17.6 million dmt per year. The study will also recognize Steensby Inlet as the priority for the deep water port and terminal for a rail line, rather than Milne Inlet on the north coast.

Concurrent with the initiation of the regulatory review process, Baffinland has continued exploration and geotechnical drilling and environmental, socio-economic and other studies in 2007. Approximately half of the 9,338 m of diamond drilling completed in 2007 was for resource delineation purposes while the balance was for geomechanical and geotechnical purposes.

Drilling of Deposit No. 1 focused on refining and increasing confidence levels to allow the company to estimate a reserve and develop its mine plan in conjunction with the feasibility study. Nine of the holes were drilled to provide both better geomechanical and assay information of the upper levels of Deposit No. 1 and to better define the distribution of deleterious elements. Two holes returned exceptionally low levels of deleterious elements; the sulphur assays being an order of magnitude lower than was estimated from the block model generated in the scoping study.

Five broadly-spaced drill holes were drilled at Deposit No. 3 and successfully established that high-grade iron mineralization is continuous for over two kilometres of strike length. Mineralization at Deposit No. 3 is more complex than previously interpreted and appears to boudinaged, bifurcated and, in part, disrupted by an intrusion. A magnetic survey is planned to better define drill targets in 2008. Drilling will continue in 2008 to refine and increase confidence levels to allow Baffinland to develop its mine plan for Deposit No. 1, in conjunction with the detailed engineering work. Metallurgical testwork is also underway.

A quarter million tonne bulk sample program commenced at Mary River and is scheduled for completion in 2008. It is expected that iron ore will be mined from two small open pits developed along Deposit No. 1. The mined material will be blended to provide both lump and fine products intended to be representative of the initial 10 to 15 years of commercial production from Deposit No. 1. The iron ore will be transported to water where it will be loaded and shipped to market. The bulk-sample program is designed to validate the high quality geologic and metallurgical characteristics of the Mary River iron ore which will be directly shipped for use at steel mills in Germany.

ROCHE BAY

Operator, Partner
Advanced Explorations Inc.,
Roche Bay plc
Commodity
Iron Ore
NTS
47A/05, 47A/06
Location
60 km southwest of Hall Beach

The Roche Bay iron formation deposits are interpreted to be steeply-dipping isoclinally folded iron formation flanked by calc-silicate metasediments. The 2007 program focused on the western flank of the C Zone which was one of five zones (A, B, C, D and E) identified in previous exploration programs undertaken in the early 1980's. Geologic analyses suggest that the eastern flank of the C Zone has a mapped strike-length of over 5000 metres and has been intruded by late-stage gabbroic dykes that locally transect the entire zone.

Advanced Explorations Inc. completed 37 diamond drill holes comprising 9,277 m in 2007. The drill program has tested Zone 1 over a strike of 4,000 m. Zone 1 is one of two parallel zones of semi-massive to massive banded iron formation that form the C Zone. Results from mapping, drilling and geophysics indicate an average width of over 200 m for Zone 1, with widths up to 300 m in the northern part. Zone 2 contains discontinuous iron formation over a 140 m true thickness.

Further work is planned for 2008.

BAFFIN ISLAND

Operator, Partners
Commander Resources Ltd.,
BHP Billiton, Xstrata Nickel plc,
Nunavut Tunngavik Incorporated

Commodity
Gold

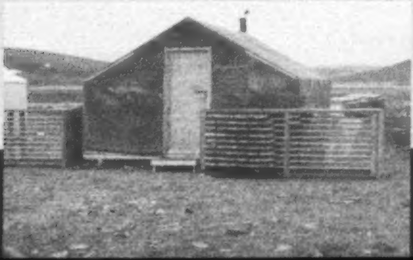
NTS
27B, 37A/09, 37A/10

Location
160 km southwest of Clyde River

The property covers the southern rift margin of the Piling Group, a sequence of Lower Proterozoic (ca.1.9 Ga) supracrustal rocks that form part of the Foxe Fold Belt. The Bravo Lake Formation of the Lower Piling Group is the principal unit of economic interest on the property and is host to gold occurrences including Malrok, Ridge Lake, Durette, Brent and the Gabbro shear zone. The Bravo Lake Formation is comprised predominantly of mafic volcanic and intrusive rocks, with clastic metasedimentary rocks and lesser amounts of iron formation and sulphidic schist. These rocks were complexly deformed by thrusting, at least three phases of folding, and upper amphibolite-grade metamorphism. A new gold discovery in 2007 brings the total known gold prospects on the property to 17, all hosted by Lower Proterozoic iron formations and shear zones along the 140 km greenstone belt.

Drilling and surface exploration at Ridge Lake and Malrok identified at least two separate sheared and mineralized iron formation units within the target Bravo Lake Formation; the upper "silicate" iron formation and the lower "sulphide" iron formation. Gold mineralization in both horizons occurs predominantly as free gold and is associated with arsenopyrite in silicified and quartz-veined iron formation. At Durette, 40 km northeast of the Ridge Lake prospect, gold is associated with a quartz vein stockwork system hosted by highly silicifed iron formation interpreted to be higher in the stratigraphic succession.

Core shack at Commander Resources' Baffin Island project.
PHOTO BY K. COSTELLO



The Brent Shear Zone cuts the stratigraphy at a higher level above a regional sulphide iron formation marker unit.

The 2007 drilling program was designed to evaluate priority targets along the 80-km central section of the belt outside of the more advanced Ridge Lake and Malrok zones in order to gain a better understanding of the potential inventory of prospects that will require more detailed work. The Malrok and Ridge Lake central zones, which were not drilled in 2007, are at the stage where detailed systematic drilling of the core mineralized zones is warranted.

At Durette, drilling confirmed a 1,300 m-long EM conductor coincident with a thick interval of highly altered silicate iron formation. Five shallow holes were drilled along a 500 m-long EM conductor coinciding with mineralization intersected in a 2006 drill hole that intersected 9.61 g/t Au over 1.56 m. Thick intervals of silicate iron formation ranging from 5 to 30 m thick and containing variable amounts of arsenopyrite and pyrrhotite were encountered in the 2007 drill holes demonstrating potential for a large mineralized system. Intervals of highest sulphide content in this iron formation contained better gold values. A high assay of 15.23 g/t Au was intersected over 0.83 m within a 7.02 m interval averaging 2.08 g/t Au in the easternmost hole (Dur-07-09) drilled at Durette. This interval is open to the east, where the Durette gold zone and the EM conductor trend into a large, shallow lake. The zone is open to the west for at least 1,500 m and is open at depth.

At the Peninsula Prospect, drilling tested the down-dip extension of a silicate iron formation which graded 8.5 g/t Au at surface. Of interest is a 1.0 m-wide horizon at a depth of 60 m in one of the drill holes that contains laminated pyrrhotite with chalcopyrite and sphalerite; assay results are pending.

Two holes were drilled on the Brent Showing late in the 2006 field season; follow-up drilling intersected northwest-trending quartz-feldspar-arsenopyrite vein systems hosted in quartz diorite. The highest assay reported is 4.22 g/t Au over 0.50 m.

A new mineralized trend called Hebert was discovered in 2007. This trend covers a seven km by two km area with quartz vein swarms carrying arsenopyrite, pyrrhotite and minor galena. Results from 53 surface samples along the new trend returned gold values that ranged from 0.99 g/t Au over one metre to 5.14 g/t Au over one metre. Two sections of channel samples outlined continuous gold mineralization with 2.18 g/t Au over three metres and 1.12 g/t Au over four metres. In addition, two grab samples returned gold values of 13.65 g/t Au and 14.81 g/t Au. The best mineralization occurs in areas of metre-spaced, well-developed quartz veins that contain 5-25% arsenopyrite. The channel sampling was limited to a small area only; the results are deemed sufficient to warrant an aggressive follow-up of detailed channel sampling and geological mapping of the entire Hebert trend.

Index

(Company names appear in bold, projects in regular type)

Adriana Resources Inc.
- Bear Valley (22)
- MIE (34)
- UNAD (26)

Advanced Explorations Inc.
- Roche Bay (68)

Agnico-Eagle Mines Ltd.
- Meadowbank (53)

AREVA Resources Canada Inc.
- Kiggavik Project (Kiggavik, Sissons) (46)
- St. Tropez Claims (50)

Atlanta Gold Inc.
- Brodeur Diamond (Jackson Inlet) (63)

Aura Silver Resources Inc.
- Greyhound Property (39)

Baffinland Iron Mines Corp.
- Mary River Iron Ore Deposits (68)

Bayswater Uranium Coproration
- Amer Lake East (50)
- Amer Lake West (50)
- Central Kiggavik (50)
- Itza Lake (Energy) (50)
- Itza Lake Property (Diamonds) (41)
- North Thelon Permit Area 1 (47)
- North Thelon Permit Area 2 (47)
- Southwest Kiggavik (50)

BHP Billiton
- Baffin Island (69)
- Keewatin Project (39)
- Target 87 (58)

BHP Billiton Diamonds Inc.
- Aviat (61)
- Chidliak (64)
- Foxe Basin (64)
- Mirage Bay (64)

Cameco Corporation
- Aberdeen (43)
- Borden (67)
- Fury-Hecla (67)
- Lac Rouviere (25)
- Nueltin Lake (47)
- Turqavik (43)

Canzinco Ltd. (Breakwater Resources Ltd.)
- Nanisivik Mine (60)

Cascadia International Resources Ltd.
- Mum Claims (57)

Comaplex Minerals Corp.
- Meliadine East (54)
- Meliadine West (55)

Commander Resources Ltd.
- Baffin Island (69)

Committee Bay Resources Ltd.
- Borden (62)
- Committee Bay (28)
- TIM (21)

Corsa Capital Ltd.
- SY Gold (56)

Dae Woo International Corp.
- Kiggavik Project (Kiggavik, Sissons) (46)

De Beers Canada Inc.
- Aberdeen (43)
- Baffin Island (62)
- Baker Property (Energy) (44)
- Cape Osborne (64)
- Chartrand Lake (18)
- Cornwallis Island (65)
- Muskox Hill (66)
- Polar Project (20)
- Rockinghorse Property (20)
- Turqavik (43)

Diamondex Resources Ltd.
- Brodeur (63)
- Heeqou (19)
- IC (19)
- Peregrine (20)
- TIM (21)

Diamonds North Resources Ltd.
- Amaruk (17)
- Hepburn Project (Diamonds) (19)
- Northern Hepburn Project (Energy) (25)
- Sakari (20)
- Siku (21)
- Ualliq (21)
- Victoria Island (21)

Dundee Precious Metals Inc.
- George Lake/Goose Lake (29)

Exploratus Ltd.
- Napajut Property (56)

First Nephi International Inc.
- Strand Fiord Coal (66)

Forum Uranium
- Kiggavik North (46)
- Kiggavik South (46)
- Tanqueray Option (46)

Garuda Capital Corp.
- Corhill (23)

Garuda Ventures Canada Inc.
- Corhill (23)

Geotech Limited
- Corhill (23)

Golden River Resources
- Hood River (29)

Hinterland Metals Inc.
- Rebel Permits (48)
- Yankee Permit (48)

Hunter Exploration Group
- Aviat (61)
- Barrow (17)
- Baumann Project (62)
- Darby (18)
- Grail (18)
- Nanuq North (42)
- SY Gold (56)

Indicator Minerals Inc.
- Barrow (17)
- Baumann Project (62)
- Borden (62)
- Darby (18)
- Dorset (66)
- Grail (18)
- Nanuq North (42)

International Samuel Exploration Corp.
- Churchill (40)
- Churchill West (40)
- Ualliq (21)

Intrepid Mines Ltd.
- Greyhound Property (39)

J.D. Charlton
- Bugs Claims (44)

James Bay Energy Ltd.
- Strand Fiord Coal (66)

JCU (Canada) (46)

Exploration Company Ltd.
- Kiggavik Project (Sissons) (46)

Kaminak Gold Corporation
- Baker Basin (43)
- Churchill (52)
- Lach (31)
- Matrix Gold (52)
- Needle Gold (32)
- SY Gold (56)
- Washburn Uranium (26)
- Yathkyed (51)

Kennecott Canada Exploration Ltd.
- Brodeur (63)
- Pitz Lake (42)

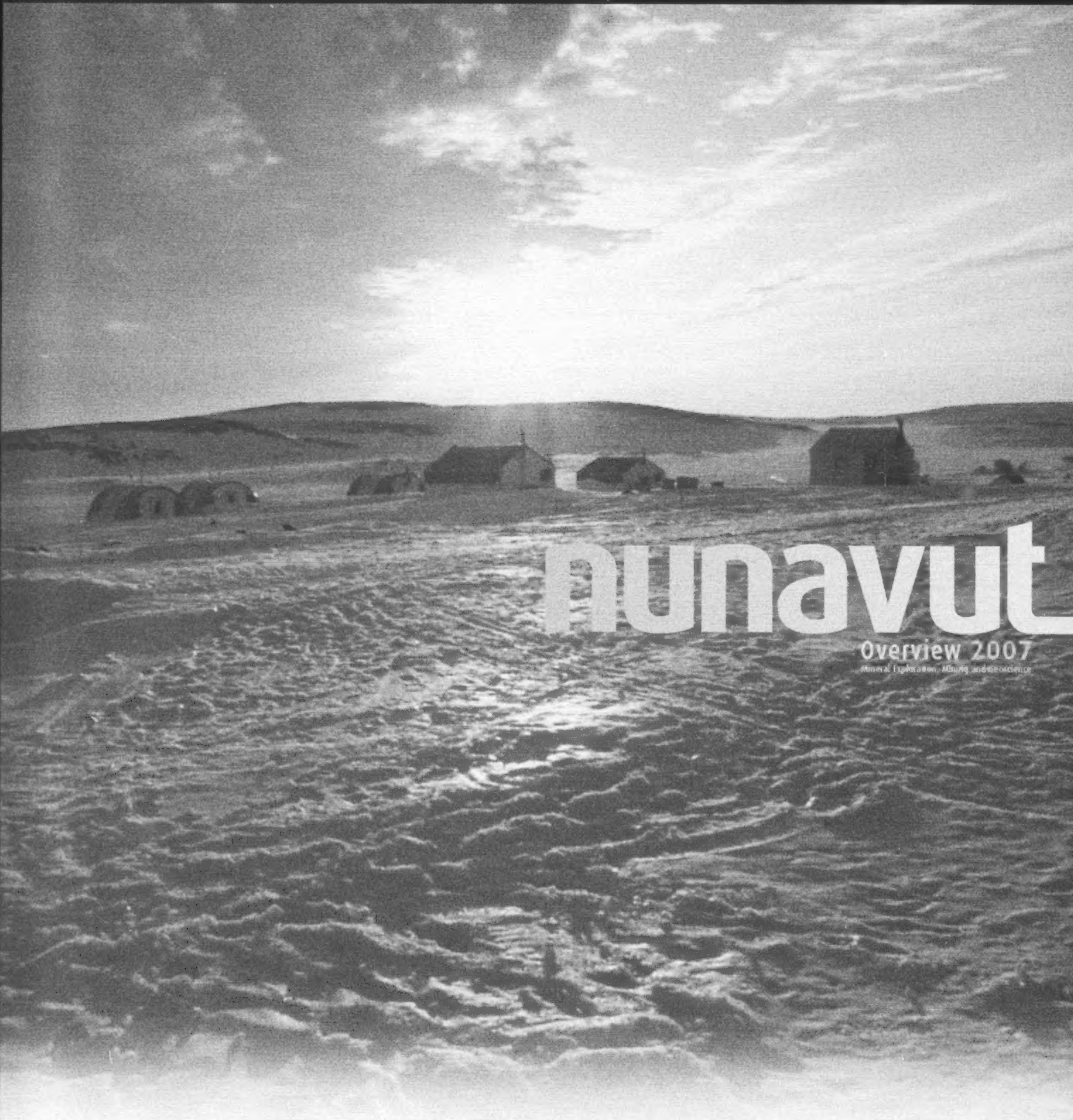
Laurentian Goldfields Ltd.
- Maze Lake (53)

Majescor Resources Inc.
- Baker Property (44)

Maximus Ventures Ltd.
- Chicago (27)
- Discovery (27)
- Twin Peaks (27)

Mega Uranium Ltd.
- Thelon Basin (48)
- Washburn Uranium (26)

- **Miramar Mining Coproration**
  - Chicago (27)
  - Discovery (27)
  - Hope Bay Project (30)
  - Twin Peaks (27)
- **Newmont Canada Ltd.**
  - Kiyuk Lake (52)
- **Nordic Diamonds Ltd.**
  - BRSC/WM (18)
- **North Arrow Minerals Inc.**
  - Anialik Project (Base Metals) (15)
  - Anialik Project (Gold) (27)
  - Blue Lake Project (17)
  - Canoe Lake (Base Metals) (15)
  - Canoe Lake Project (Gold) (27)
  - Eagle (28)
  - Hope Bay Project (31)
  - Napaktulik (16)
  - Regan Lake (33)
  - Silvertip (36)
- **Nunavut Tunngavik Incorporated**
  - Baffin Island (Gold) (69)
- **Pacific Ridge Exploration Ltd.**
  - Baker Basin (43)
  - Matrix Gold (52)
- **Patrician Diamonds Ltd.**
  - Borden (62)
- **Peregrine Diamonds Ltd.**
  - Chidliak (64)
  - Foxe Basin (64)
  - Mirage Bay (64)
  - Nanuq (41)
  - Nanuq North (42)
  - Timmijuuq (66)
- **Pitchstone Exploration Ltd.**
  - Dismal Lake Property (24)
  - Dismal Lake West (24)
  - Kendall River (24)
  - Mountain Lake (24)
  - Mountain Lake Option (24)
- **Prize Mining Corporation**
  - Muskox Intrusion Project (35)
- **Pure Diamonds Exploration Inc.**
  - Baffin Island (62)
  - Cape Osborne (64)
  - Chartrand Lake (18)
  - Cornwallis Island (65)
  - Muskox Hill (66)
- **Pure Nickel Inc.**
  - Rainbow Property (58)
- **Resource Capital Fund**
  - Meliadine East (54)
- **Roche Bay plc**
  - Roche Bay (68)
- **Rockgate Capital Corp.**
  - Bathurst Inlet (22)
  - Turner Lake Gold Property (33)
- **Sabina Silver Corporation**
  - Hackett River (36)
- **Savant Explorations Ltd.**
  - Yava (37)
- **Shear Minerals Ltd.**
  - Churchill (40)
  - Churchill West (40)
  - Sakari (20)
  - Siku (21)
- **Silvermet Inc.**
  - Muskox Intrusion Project (35)
- **Starfield Resources Inc.**
  - Ferguson Lake Project (57)
- **Stornoway Diamond Corporation**
  - Aviat (61)
  - Baumann Project (62)
  - Churchill (40)
  - Churchill West (40)
  - Hyde (41)
  - IC (19)
  - Itza Lake Property (41)
  - Peregrine (20)
  - TIM (21)
- **Strongbow Exploration Inc.**
  - North Thelon Permit Area 1 (47)
  - North Thelon Permit Area 2 (47)
  - Silvertip (36)
- **Superior Diamonds Inc.**
  - Kiggavik North (46)
  - Kiggavik South (46)
  - Tanqueray Option (46)
- **Tahera Diamond Corporation**
  - Hood River Claims (19)
  - Jericho Diamond Mine (19)
  - Polar Project (20)
  - Rockinghorse Property (20)
- **Tanqueray Resources Ltd.**
  - Mum Claims (57)
  - Tanqueray Option (46)
- **Teck Cominco Limited**
  - Darby (18)
  - Jericho Diamond Mine (19)
  - Polaris (60)
- **Terrane Metals Corp.**
  - Maze Lake (53)
- **TerraX Resource Corporation**
  - Needle Gold (32)
- **Titan Uranium Inc.**
  - Thelon Basin (48)
- **Tradewinds Ventures Inc.**
  - Turner Lake Gold Property (33)
- **Tri Origin Exploration Ltd.**
  - Keewatin Project (39)
- **Triex Minerals Corporation**
  - Dismal Lake Property (24)
  - Dismal Lake West (24)
  - Kendall River (24)
  - Mountain Lake (24)
  - Mountain Lake Option (24)
- **True North Gems Inc.**
  - Beluga Sapphire (67)
- **UNOR Inc.**
  - Asiak River (22)
  - Bear Valley (22)
  - Borden (67)
  - Coppermine River (23)
  - Fury-Hecla (67)
  - Lac Rouviere (25)
  - UNAD (26)
- **Uranium North Resources Corp.**
  - Amer Lake (43)
  - Northern Hepburn Project (25)
  - South Baker Project (Hawk, Kam, JG) (43)
  - Yathkyed Lake Property (51)
- **Uranium World Energy Inc.**
  - Baker Property (44)
- **Uravan Minerals Inc.**
  - Garry Lake (45)
- **Ur-Energy Inc.**
  - Bugs Claims (44)
- **West Hawk Development Corporation**
  - Nunavut Coal Property (66)
- **Western Uranium Corporation**
  - Ruby Hill Property (49)
- **Xemplar Energy Corp.**
  - Corhill (23)
- **Xstrata Nickel plc**
  - Baffin Island (Gold) (69)
- **Xstrata plc**
  - Hood (15)
- **Zinifex Canada Inc.**
  - Gondor (15)
  - High Lake (15)
  - Hood (15)
  - Izok Lake (16)
  - Lupin (32)
  - Ulu (32)



nunavut

Overview 2007

Mineral Exploration, Mining and Geoscience

Nunavut

NUNAVUT TUNNGAVIK

Indian and Northern Affairs Canada
Affaires indiennes et du Nord Canada